WIN!
5 Amiga CD
consoles up for grabs!

AMIGA
FORMAT

GOLD

SWOON!

Revealed The top 50 hottest, hardest and unmissable Amiga products of all time.

SCOOP!

AMIGA CD Get the full picture on the stunning new Amiga!

32bit

Cover Disk 50

AMIGA FORMAT

All Amigas ● Demos require 1 meg ●

Deluxe Music Construction Set 2
Create your own tunes in this excellent demo of Electronic Arts' latest powerful but easy-to-use sequencer.

Insectoids2
Fast arcade zapper written in Blitz Basic. Addictive and very nostalgic!

AMOS Source Code
Standard Amiga tools & gadgets.

LOOK!
Deluxe Music Construction Set 2

ON TEST
A1200 RAM expansion cards

09

9 770957 486029

Thought of the month:
"Editor – Easy Life!"

News

Screenplay _____ 55
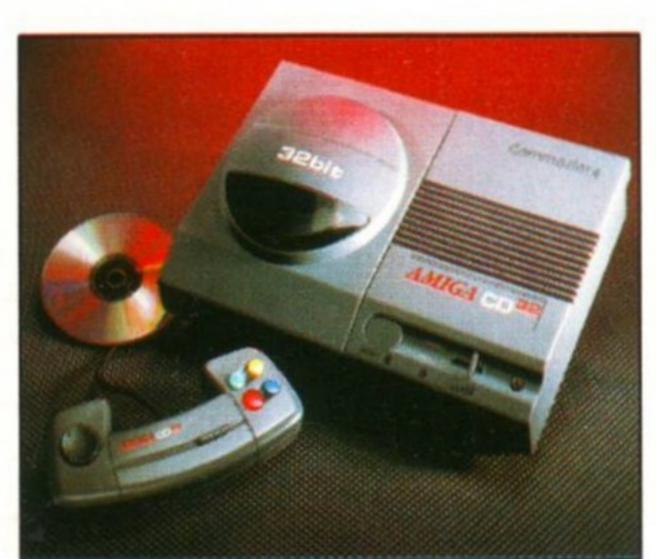
CD32 special
A look at Commodore's new CD games console. Dying to take a look? See **page 12**

WIN a CD32
We've got five of these brand new machines to give away on **page 81**

REVIEWED:
Seven Amiga 1200 RAM expansions tested.

Find out which is the best way to add memory to your A1200 in our comprehensive round-up

See page 132.

Reviews

REVIEWED:
Blitz Basic 2

Already responsible for several top PD games, this hot contender from Down Under is looking to knock *AMOS* from the programming top spot. Will it? Find out on page... 118

REVIEWED:
AGA monitors.
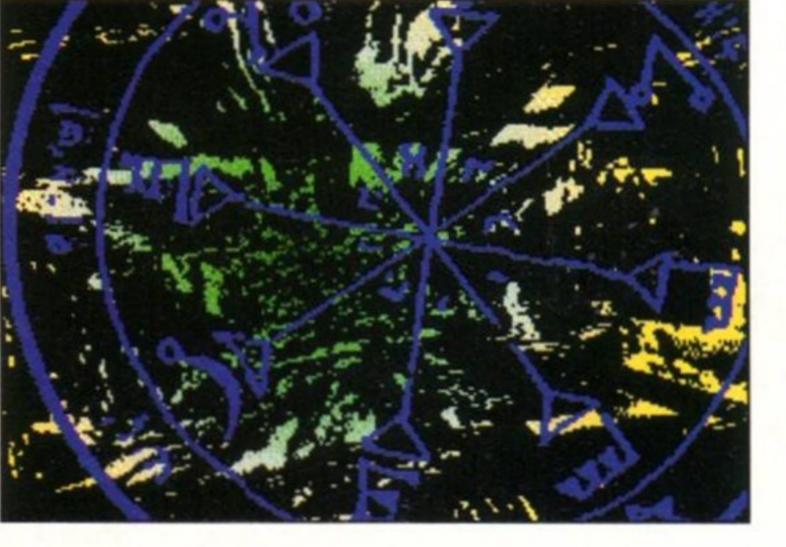
Having trouble displaying all those new screen modes on your old 1084? Then take a look at this batch of new multi and dual sync monitors. Page... 128

FEATURED:
Pressure sensitivity

Hand drawn effects are notoriously difficult to obtain with most computer graphics packages. Unless they're pressure sensitive that is. Find out which are on page... 122

Regulars

IN PD DEMOS:

If you're after acid rave sonics and psychedelic visuals, or you just want a bunch of great cheap software, turn now to page... 157

50 Golden Greats

We take a look back through our first 50 issues, and come up with the 50 products that have excited us the most. **Page 27**

WIN! MEGA PRIZES P48

WIN! Your game released by Vivid Image Software.

WIN! A Panasonic laserwriter or dot-matrix printer.

WIN! A feature packed video editing studio.

WIN! A day in a professional recording studio.

The second Future Entertainment Show
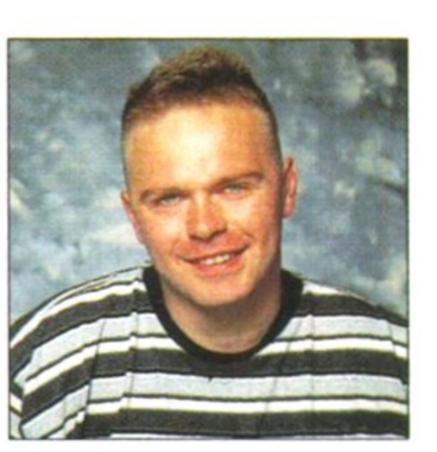
Welcome to Amiga Format!

After months and months of speculation and rumour, Commodore have finally revealed their follow up to CDTV. The new unit, rather than being a home interactive multi-player, is a CD-based AGA console, as we predicted way back in December of last year. But what does the new unit mean? It means a more secure financial future for Commodore, it means more and better AGA games for all Amiga owners, and it means that the A1200 will have a CD drive early next year. In short it is a good thing for all. Turn now to page 12 and get a first glimpse of the fabulous new Amiga CD³².

This, as you may already realise is our 50th issue. To celebrate this golden anniversary we are taking a look back at our favourite 50 Amiga products of all time. Whether they be hardware or software, serious or games. We've rooted through our cupboards, dug out a host of our favourite products, then sat down and argued at length about which were the best, and why.

Find out what our conclusions were on page 27 of this issue.

As news of Commodore's new console breaks, we here at Amiga Format are preparing for this November's Future Entertainment Show at Olympia. If you were at last year's show you will remember that there was a lot of excitement about the consoles, and this year Amiga CD³² will be creating a stir all of its own. So to make sure the Amiga doesn't get overlooked we've arranged a series of competitions to prove how great a creative computer it is. So if you are a wiz with video, game design, music or graphics, turn now to page 48, and take a look at some of the fantastic prizes you can win. All these prizes will be presented at the Future Entertainment Show. So get creative, and get your entries in.
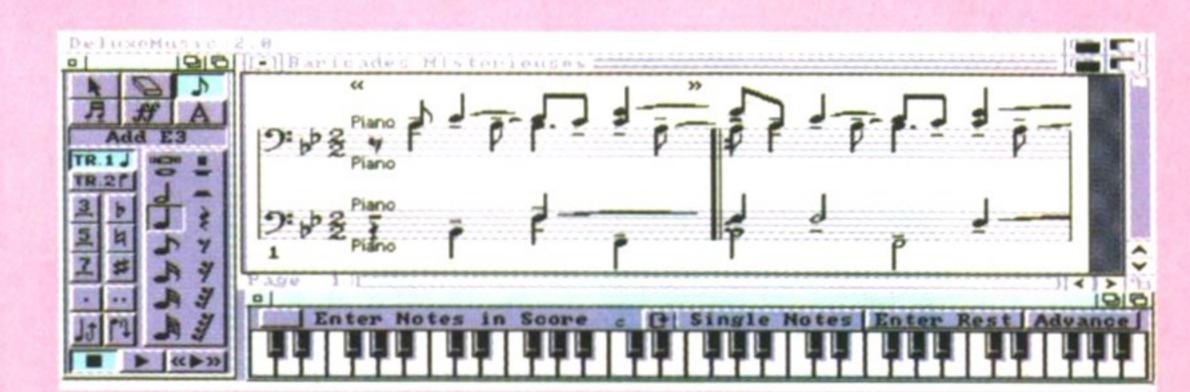
Marcus Dyson, editor

Deluxe Music Construction Set 2

Ever wanted to compose music, but never had a teacher? Ever wanted a music program that was as simple or complicated as you wished? This demo of Electronic Art's latest contender is one of the easiest music program's we've yet seen. Full instructions on page 6.

Insectoids2

This is a simple but elegant game written by the 'Down Under AMOS', Blitz Basic 2. Although it appears a little primitive, the gameplay is truly excellent. It's like playing an early arcade machine that never really existed! Blast your way up the high score table, but do read the instructions on page 10 before you begin your campaign for intergalactic domination.

AMOS Interface

There has always been a problem for AMOS programmers – you can't easily make your programs work the same way as professional Workbench 2 utilities, simply because the commands there are not quite up to it. Until now that is – Paul Firth must have spent ages getting this library of window, icon and gadget routines just right. Instructions are on page 8.

Full Coverdisk instructions start on next page...
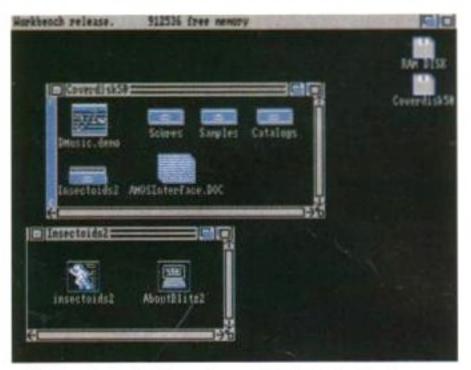
It's all very easy unwrapping your little disk from its cellophane bag and sticking it straight into the drive, but if you really want to get the most out of your Coverdisk, then check out Pat McDonald's advice.

Cover Disk 50

Deluxe Music Construction Set 2
Create your own tunes in this excellent demo of Electronic Arts's latest powerful but easy-to-use sequencer.

Insectoids2
Fast arcade zapper written in Blitz Basic. Addictive and very nostalgic!

AMOS Source Code
Standard Amiga tools & gadgets.

Deluxe Music Construction Set 2

GETTING STARTED

A fairly plain looking Coverdisk, but that's down to the size of the DMCS demo. More details about *Blitz Basic 2* can be found in the *Insectoids* drawer.

In order to use the Coverdisk, you will need any 1Mb Amiga. Turn it on, insert the Coverdisk, and, after a few moments, the Amiga will ask you if you want to play the *Insectoids2* game. It does this because on some machines you have to load the game before you can load Workbench.

If you type "y" or "Y" and hit return, the game will load (it takes about 30 seconds). If you type "n" or "N" and hit return, a cut-down version of Workbench will load, in order for you to either run the *Deluxe Music Construction Set 2* demo or read the notes on the AMOSInterface code.

In order to do this, all you have to do is move the mouse pointer (shaped like a frog) over the Coverdisk icon, and click twice with the left mouse button. A window will open, showing the contents of the Coverdisk.

The only icons worth double-clicking on again (in order to run them) are the DMCS 2 icon, the AMOSInterface.doc icon and the AboutBlitz2 icon in the *Insectoids2* drawer.

Although you can quit out of the documents and the demo, it is a good idea to reset the Amiga between the programs – hold down the Ctrl key and the two keys either side of the space bar. Easy when you know how!

By the way, the ASL13 and GADTOOLS13 library files are copyright of Electronic Arts, and are solely for running the demo. It is illegal to use or alter these files for other purposes without the express written permission of Electronic Arts. So leave them alone!

Electronic Arts ■ PAL/NTSC

The original *Instant Music* dates from the earliest days of the Amiga, and was a simple jamming program. *Deluxe Music Construction Set* enabled you to arrange Amiga samples, but did not work with Midi. Now, the latest in the line has much more potential – but it hasn't sacrificed any of its user-friendliness.
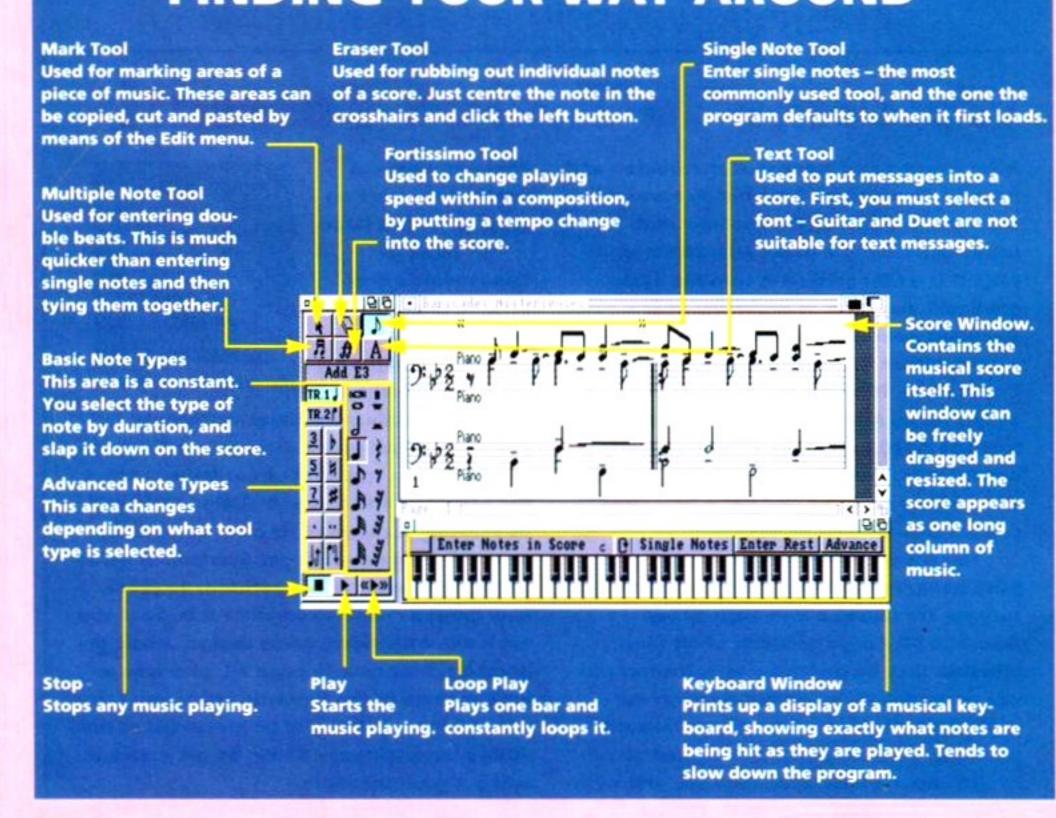
It may seem daunting at first, especially if you cannot read sheet music. However, the idea is that you pick up such knowledge by messing around with the demo. Because it can play back scores visually as well as aurally, you begin to learn what sheet music actually sounds like almost straight away.

There's nothing to stop you from entering existing sheet music into the demo, but you can't save any musical scores on to disk because the save function has been disabled. If it wasn't, people might be tempted not to get the full commercial version.

The basics of controlling it are fairly Amiga standard. Moving the mouse pointer over certain areas causes it to change. For instance, if you move it over the music stave, the mouse pointer looks like a note. Clicking with the left mouse button will select a change. Move it over the scores and it puts down a note, pull the pointer over the play button and the music will play. The right mouse button is used for selecting options from the overhead menus. Just hold it down, move the mouse to highlight the option you want, and let go.

An example score is provided, called Baricades Misterieuses. To load it, hold down the right mouse button and move the mouse pointer to the project menu. Then move down the menu until Open Score is highlighted. Let go of the mouse button, and double click on the Baricades Misterieuses name. The file takes about 20 seconds to load.

FINDING YOUR WAY AROUND

Mark Tool
Used for marking areas of a piece of music. These areas can be copied, cut and pasted by means of the Edit menu.

Multiple Note Tool
Used for entering double beats. This is much quicker than entering single notes and then tying them together.

Basic Note Types
This area is a constant. You select the type of note by duration, and slap it down on the score.

Advanced Note Types
This area changes depending on what tool type is selected.

Eraser Tool
Used for rubbing out individual notes of a score. Just centre the note in the crosshairs and click the left button.

Fortissimo Tool
Used to change playing speed within a composition, by putting a tempo change into the score.

Single Note Tool
Enter single notes – the most commonly used tool, and the one the program defaults to when it first loads.

Text Tool
Used to put messages into a score. First, you must select a font – Guitar and Duet are not suitable for text messages.

Score Window.
Contains the musical score itself. This window can be freely dragged and resized. The score appears as one long column of music.

Stop
Stops any music playing.

Play
Starts the music playing.

Loop Play
Plays one bar and constantly loops it.

Keyboard Window
Prints up a display of a musical keyboard, showing exactly what notes are being hit as they are played. Tends to slow down the program.

Getting MiDi to work

Workbench 2 and 3 owners have to do a bit of extra work in order to get at the Midi Settings menu option. The demo as set up only lets you get at the menu on Workbench 1.3. The reason for this is that the full commercial program needs two floppy drives or a hard drive.

When you make the necessary changes, it's a very good idea to do it on a copy of the Coverdisk, rather than on the Coverdisk itself. I apologise for this necessity, but it's a lot easier for Workbench 2 and 3 users to copy the Camd.library file than it would be for Workbench 1.3 users.

1 First, load Workbench, insert the Coverdisk and double click on its icon.

2 Next, select Show/All files from the Window menu. Now scroll the area until you can see the Libs drawer on screen.

3 Double click on the drawer, then drag the Camd.library icon into the Libs2 drawer (for Workbench 2 users) or Libs 3 (for Workbench 3). The demo should now work fine for Midi!

How to enter a score

The whole reason for the program is to compose your own music. If you've never done this before, or can't even begin to read music, Deluxe Music 2 will teach you plenty about it. Just be prepared to experiment a lot...
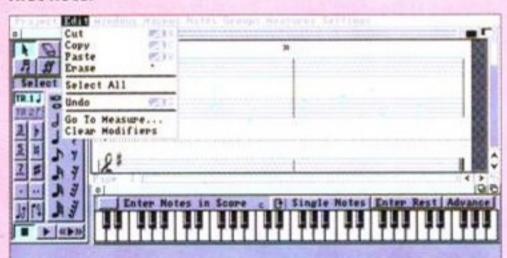
1 First, if you are entering some sheet music, set the key of the song, and the clef it's printed on, by means of the Measures menu.
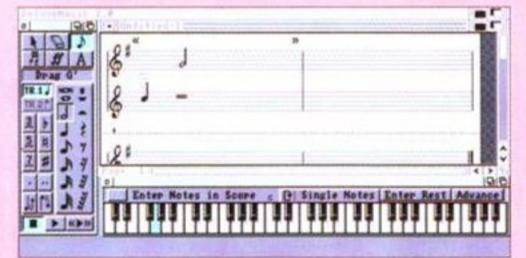
2 Again, use the Measures menu to Insert a few measures, to give you some space to work on.
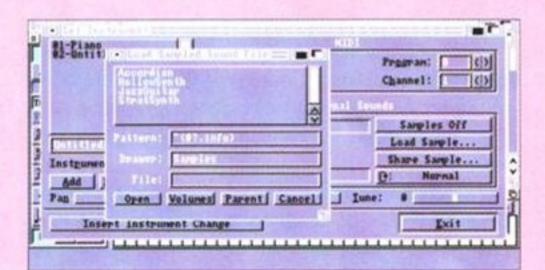
3 Next, click on the single beat note, and click and hold somewhere on the stave. You'll hear a tone. Keeping the mouse button held down, move the mouse up and down, until you are happy with the tone of the first note.

4 The purpose of the different note types is that some notes last longer than others. It's usually easier at first to change the tempo of the music to get the note length you require.

5 As a default, the program works at 4/4 time, which means four beats per bar. Don't try to fit all your notes on one bar – just concentrate on getting one sequence of beats right. Extra notes in a bar will appear grey and won't play.

6 When you are happy with the way a sequence sounds, add a few more measures, and try to copy and paste what you have composed into the right places in a song. At first this will be a matter of trial and error, but eventually your melodies will start falling into the same place.

7 As a default, DMCS2 uses a piano sample. If you want to change this sound, you can load one of four other samples from the Coverdisk. Select Set Instrument from the Measures menu, click on Add, then on the sample you want.

8 Eventually you will probably want to learn just what all those strange-looking signs and squiggles are for. Most of them either alter the tone of a note, the duration or the way in which it is played. Try marking out a series of notes, and then select Play Style from the Notes menu. Have fun!

GLOBAL VARIABLE LIST

It's fairly easy to load these procedures into *AMOS*. Just load that language as usual, then put in the Coverdisk. Hold down the right mouse button, click on Load. A list of the contents of the Coverdisk comes up. Click on AMOSINTERFACE.AMOS, and the code will load. It only takes up about 35K in total.

Variable	Purpose
X Position:	An X co-ordinate pixel number, usually 0-639
Y Position	A Y co-ordinate number, usually 0-255
Width	The width of a window in pixels.
Height	The height of a window in pixels.
Gadget	A flag – gives new windows a close gadget.
Title$	The title name of a window.
Button1-2$,	Text messages written on to a pair of buttons.
Widthofbuttons	The numeric width of buttons, in pixels.
Butdistedge	The distance from a button to the screen's edge.
Insidepattern	A flag – whether or not a window is patterned.
Xposition	Of text used in a window. Measured in pixels.
Yposition	Of text used in a window. Measured in pixels.
Title$	Name of a new window.
Line1-7$	Text messages inside a requester box.
Button1-2$	REAL3DMESSAGE text names for buttons
Embossed	A flag – whether or not a window is indented.
Zhonenumber	A number for a zone created on screen.
Setupzone	A flag – creates *AMOS* zones for new windows.
Tick	A flag – whether or not TICKBOX puts up a tick.
Cycle1-4$	Gadget text which can be cycled between.
Position (1-4)	Which gadget is currently being displayed.
Xbar	A slider's distance from its leftmost margin.
Isitfilled	Whether or not a bevel is filled.
_Fillcolour	What colour to fill a bevel with.
Message$	Text centred inside a CLICK or HEAVYCLICKBOX.
Screantitle$	The title for a screen, as opposed to a window.
X_Mouse	Current X position of the mouse pointer.
Y_Mouse	Current Y position of the mouse pointer.

Amos Interface

Paul Firth ■ NEEDS AMOS

THERE ARE MANY stumbling blocks to *AMOS*, but one of the biggest is that *AMOS* programs nearly always look like *AMOS* programs, and it takes a lot of painstaking work to personalise things like the file requester, the mouse pointer and the *AMOS* boxes and buttons.

That's where this source code comes in handy. Paul Firth has written quite a large set of procedures

which can be used to create Workbench 2-style user controls. If you load this program into *AMOS* and run it, it will present a couple of screens showing exactly what it can do.

Workbench 2 and 3 produce a distinctive embossed effect to show which windows, gadgets and icons are selected. These routines give you that particular visual method for displaying control screens. However, managing these effects is largely down to you.

Paul Firth, the author, is more than happy for these procedures to appear in other people's programs. A credit to him inside the program would be a polite gesture though.

Which is where this page comes in handy – you'll find a complete list of all the procedures, what their entry variables are, and what effects they produce on screen. Bear in mind that the code does not produce Workbench feedback effects such as the menus appearing when you click the right mouse button. They give the look enjoyed by Workbench 2 and 3 owners, but it's up to you to get the feel right.

Using these routines, it's easy to get Workbench 2-like control screens. The tricky bit is making them work!

THOSE PROCEDURES IN FULL

REAL3DWINDOW
Sets up window areas with up to two optional buttons on.
Variables used: X Position, Y Position, Width, Height, Gadget (TRUE/FALSE), TITLE$, BUTTON1-2$, WIDTHOFBUTTONS, BUTDISTEDGE.

TICK BOX
Creates a box with an optional tick in it.
Variables used: X Position, Y Position, TICK (TRUE/FALSE), ZHONENUMBER, SETUPZONE (TRUE/FALSE).

CLICKBOX
Sets up one button to be clicked on. This comes in handy for when you want more than one or two buttons. Variables used: X Position, Y Position, Width, Height, EMBOSSED (TRUE/FALSE), MESSAGE$, ZHONENUMBER, SETUPZONE (TRUE/FALSE).

CYCLEBOX
Used to create cycling gadgets. Up to four positions are possible without rewriting the procedure. Variables used: X Position, Y Position, Width, Height, Position (1-4), Embossed (True/False), SETUPZONE (TRUE/FALSE), ZHONENUMBER, CYCLE1-4$ text displayed after 1-4 mouse clicks. Position (1-4).

REAL3DMESSAGE
Used for creating requester boxes. Variables used: X Position, Y Position, Width, Height, Insidepattern (TRUE/FALSE), XPOSition of any text, YPOSition of any text, Title$ of window, LINE1-7$, BUTTON1-2$. If only one button is present it will be centred.

ENTERBOX
Used for creating blank edged boxes, for example for entering text. Variables used: X Position, Y Position, Width, Height, ZHONENUMBER, SETUPZONE (TRUE/FALSE).

HEAVYCLICKBOX
Sets up one button to be clicked on. Very similar to Clickbox, but puts a thicker line around the box. Variables used: X Position, Y Position, Width, Height, EMBOSSED (TRUE/FALSE), MESSAGE$, ZHONENUMBER, SETUPZONE (TRUE/FALSE).

HEAVYICON
Used for rectangular blank zones that can be embossed. Variables used: X Position, Y Position, Width, Height, Embossed (TRUE/FALSE), ZHONENUMBER, SETUPZONE (TRUE/FALSE).

FINDMOUSELIMIT
Used by DRAGTHEWINDOW to find out just where a window can be dragged to.
Variables used: X Position of window, Y Position of window, Width, Height, X_Mouse, Y_Mouse.
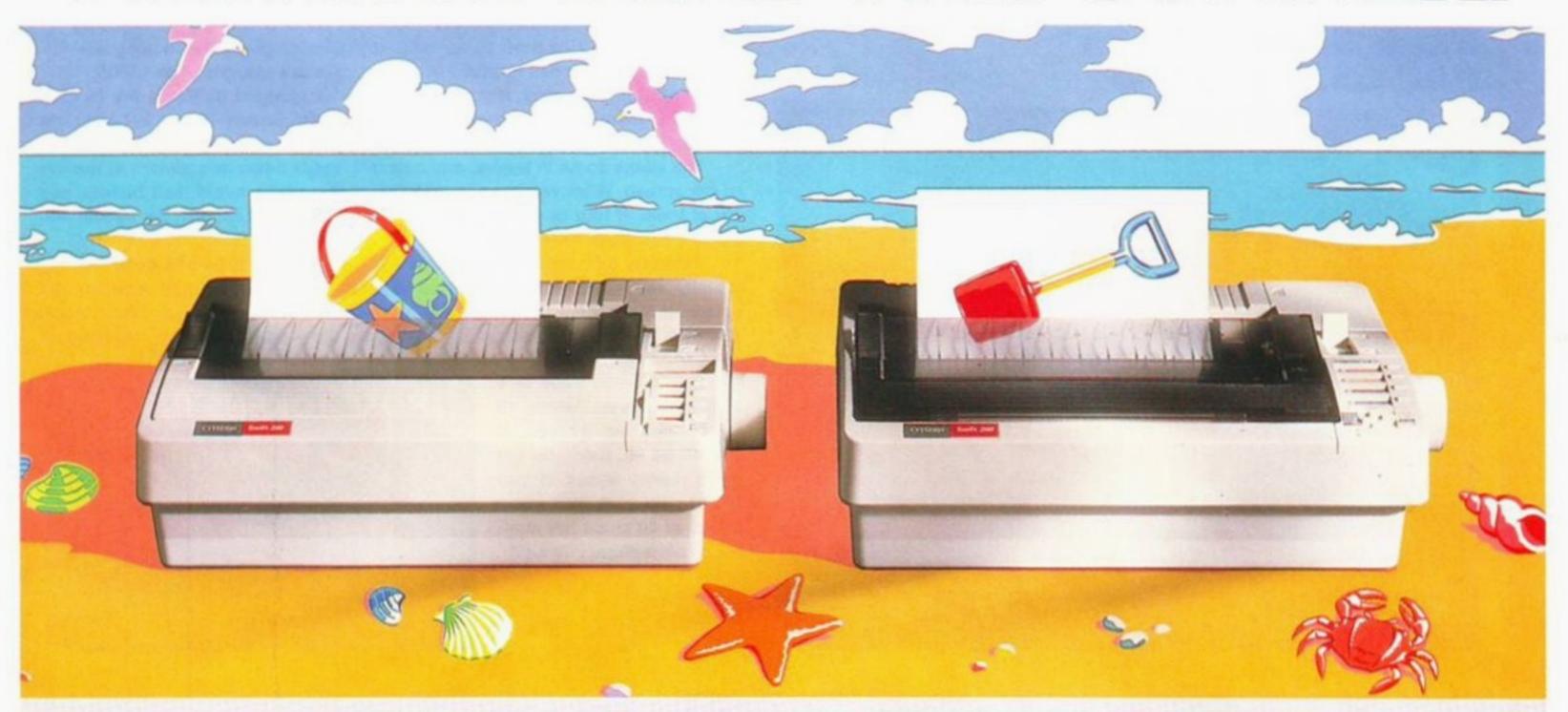
SLIDER
Creates a slider bar. XBAR is the starting position of the solid bar. Variables used: X Position, Y Position, Width, XBAR, ZHONENUMBER, SETUPZONE (TRUE/FALSE)Creates a button-like gadget. Variables used: X Position, Y Position, EMBOSSED (TRUE/FALSE).

SCREANTITLE
Puts a title at top left of the current screen. Variables used: SCREANTITLE$.

Insectoids2
Mark Sibly
PAL Only

If you want stunning graphics and sound, look elsewhere. If you want good playability and fun, *Insectoids2* has both in large amounts!

One of the best games we've seen lately for playability, *Insectoids2* is a simple shoot-em-up, very reminiscent of early Eighties eight-bit arcade games such as *Galaxians* and *Space Firebird*. It was programmed by Mark Sibly using Blitz Basic 2 (see review of Blitz on page 118), a programming language that has received little coverage in comparison to AMOS.

Control is very easy, if you have a joystick plugged in. Press fire to start the game. There's a spaceship in the middle of the screen – move left and right with the joystick and press fire to shoot at the aliens screaming down at you.

The aliens come in waves, and normally settle down in a pattern at the top of the screen. What you have to do is avoid the aliens, avoid their bullets, and shoot them. If four or more aliens are alive on the screen, a flying saucer will go over the top of the screen.

Shooting this saucer will release a token, which will be one of five types. Usually, the token either speeds up your movement left or right, doubles the spread of your firepower, speeds up your shots or lets you have another shot. The fifth, heart-shaped power up is an extra life – collect as many of these as you can.

Every fourth wave is a challenge wave, when 40 alien ships zip by you. If you hit all 40, then you get 1,000 points bonus. If you hit less than 40, you get a bonus of 10 times the number of alien ships you shot.

THOSE TOKENS IN FULL

- Move faster Left/Right
- Double Shot Firepower.
- Faster Shots.
- Extra Shots.
- Extra Life.
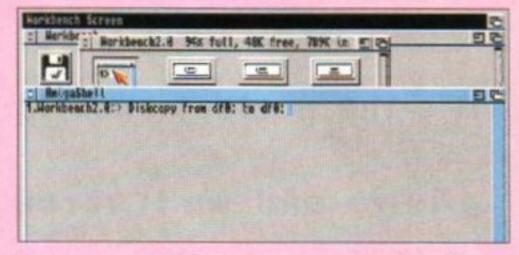
Backing up your Disk

There are two ways of making a copy of your disk, and this is the easy one. Don't be daunted by the fact that you need to use the Shell or CLI: it's actually a lot easier than you might think. Just follow these simple steps...
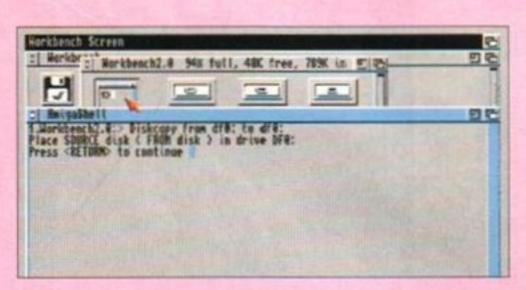
1 Load your Workbench disk. Open the disk, find the icon that says Shell or CLI and double-click on it.
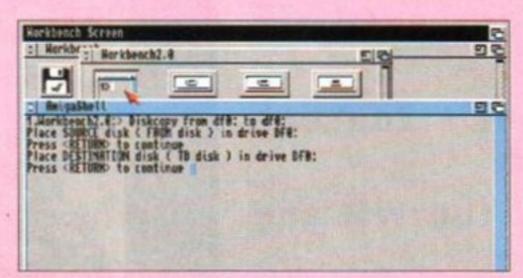
2 When the Shell window appears and the drive light is out, type in (DF0 as in Zero, not DF0 as in Oops):
Diskcopy from df0: to df0:
and press the Return key.
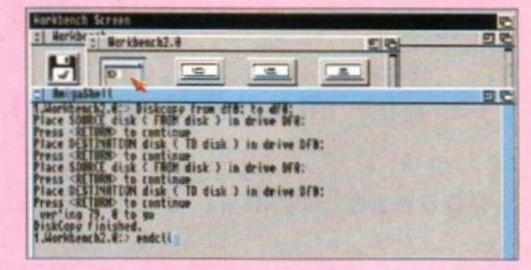
3 The Amiga will now ask you to insert the 'source' disk. It means the disk you want to copy, so put the Coverdisk in the drive and press the Return key.

4 Wait for a while and it will read all the information off the Coverdisk, telling you how far it has got. Then it will ask you to insert the 'Destination' disk. Put the disk you want to copy your Coverdisk on to, in the drive and press the Return key. Note that the disk does not need to be formatted already.

5 Put the source disk and destination disk in a couple more times when the Amiga asks for them. When it says "Diskcopy Finished" just type in:
endcli
to get out of the Shell or CLI. You may have to put the Workbench disk in again. Now your copy is ready!

Disk not working?
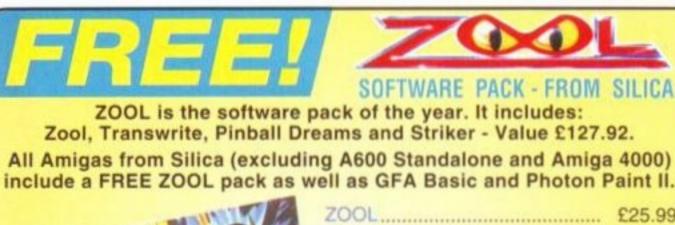
We duplicate nearly 200,000 disks every month. Out of all those, obviously a few will be faulty. If the disk or any of the programs will not load or run properly, there may be a problem. Don't panic!

First try using the *DiskDoctor* utility on your Workbench disk to rescue it before sending it off for a replacement. In-full details of *DiskDoctor* can be found in the user's manual that came with your machine.

However, if your Coverdisk is in fact faulty, you should send it back INCLUDING A STAMPED, ADDRESSED ENVELOPE for a free replacement within one month of the cover date to:
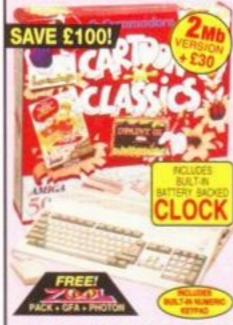
Amiga Format September Disk
Disk Copy Labs Ltd
Units 2&3
Omega Technical Centre
Drayton Fields
Daventry
Northants
NN11 5RT

For months, everyone's been talking about Commodore's new CD console unit. Talkin' lots, but not sayin' much. Until now that is. Commodore have taken the wraps off what has been their most eagerly awaited new product. It's an...

Amiga CD^{32} console!

If you like what you see then there's much more on offer. Over the next six pages we'll show you the Amiga CD^{32} – inside and out. So read on if you know what's good for you...

Audio out

Composite out

RF socket

S Video socket
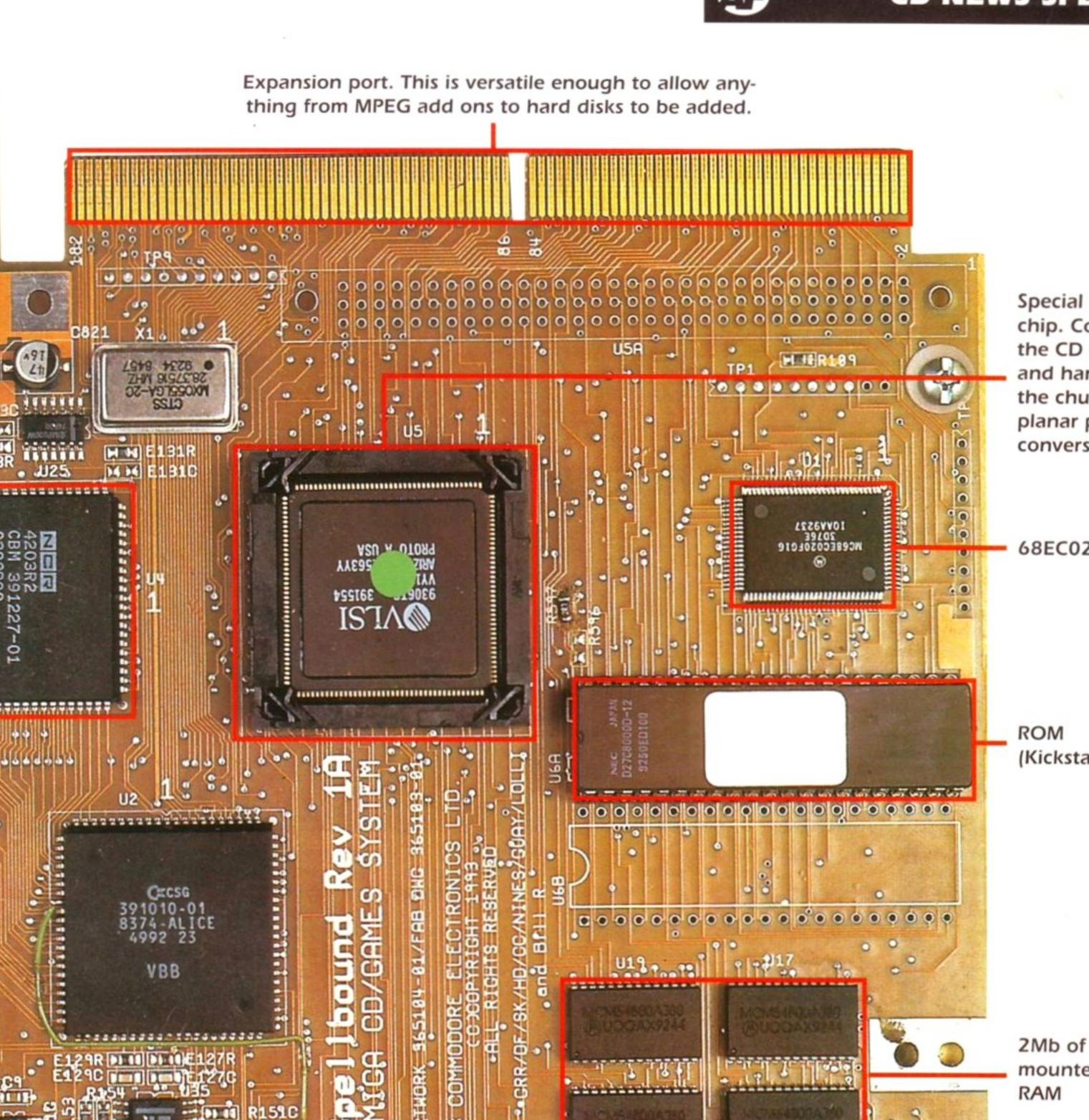
Connector to CD-ROM drive

AGA chip set

Headphone socket

Headphones volume

Reset button

A look inside the CD³²

Expansion port. This is versatile enough to allow anything from MPEG add ons to hard disks to be added.

Special custom chip. Controls the CD drive and handles the chunky to planar pixel conversion.

68EC020 CPU

ROM (Kickstart 3.1)

2Mb of surface mounted chip RAM

A rather nice example of 256 colour cycling appears when you start the machine up without a CD in the drive.

Beating the best – Atari, Nintendo and Sega – in producing a 32-bit CD console is quite an achievement for Commodore. We take a look at this new marvel games machine to find out if it really is a…

Mega CD beater!

IT WOULD BE a strange Amiga magazine reader who was totally ignorant of the 'top secret' project Commodore have been developing behind closed doors recently. For many months we've been speculating about the existence of a new 32-bit CD-based Amiga console. With each passing issue the rumours have become more frequent, the gossip more convincing. Recently the facts began to surface, and the reality sounded like it was going to be uncannily close to the machine we predicted in 'The Future of the Amiga' piece in our January issue.

Now the wraps are off the new machine, and the secret is out for all to behold. Commodore have beaten Nintendo, Sega, Atari and 3DO to the milestone of the first 32-bit console. Not only that, but it's also the first 32-bit CD console, and the first standalone CD console to go on sale in Europe.

Commodore's UK general manager, David Pleasance, sums up the size of this achievement: "The Amiga CD32 simply wipes out the opposition. It is considerably more powerful, has better software support and, best of all, it costs less."

Of course the machine is an A1200 at heart. Which means that it features a Motorola 68020 CPU running at 14Mhz and 2Mb of RAM,

Commodore's exciting new machine, the Amiga CD32 console, will be available for all to see mid to late August.

" I'm proud to be associated with a product which will set new standards for fans of electronic games " Lou Eggebrecht Commodore VP of Engineering

just like its computer brother. But the A1200 has hardly distinguished itself as the greatest games machine to date, so why should the console version fair any better?

The key to success as a games machine (or indeed, as any type of computer) is software support. When the A1200 was announced to developers about a year ago, they were also told that CD capability was to follow. So while the A1200 had to wait for the development lead time to elapse before true AGA games started to appear for it, software developers have had time to prepare for the CD console.

The first generation of true AGA games are just beginning to appear, but most will appear on shop shelves in time for the pre-Christmas
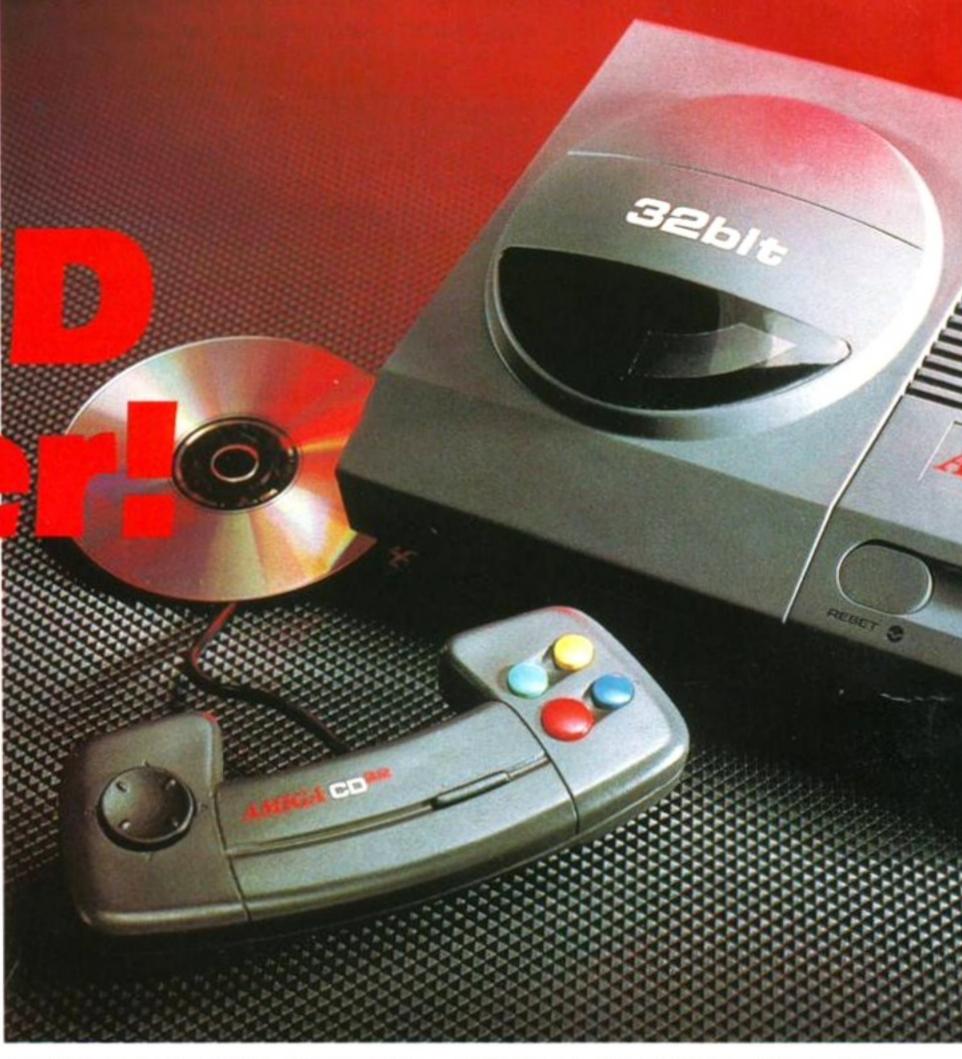
buying season. However, many of those games will have a CD version launched at the same time as the floppy.

The console is due to hit the streets in late August, and when it does, 16 to 18 shiny new CD-based AGA games will appear too. Among these are many of the big name games of the year – *Diggers, Pinball Fantasies, Zool 2, Chaos Engine* and *Jurassic Park* are just some of the first bunch of releases. Virtually all of the games will be completely new products, although a few old favourites will be making the leap to the silvered disc too.

The new machine will certainly boost business for software developers. Michael Hayward of Millennium says: "CD32 will set new standards for power and value. It allows us to develop more potent and inventive games with higher production values. We have two titles ready. *James Pond 2 – Robocod* features new levels, improved speed and playability. *Diggers*, a huge strategy game, has been especially produced to take full advantage of Amiga CD32's speed and power."

Thalion are also developing new products specifically to take advantage of the CD32's features. Tony King explains: "Thalion are pleased to be part of the CD32 experience with our new product *Ambermoon CD32*."

The CD32 has been put to some thorough testing, and not just by Commodore. Because they were determined to get this one right,

GOODBYE SWEET-SIXTEEN, HELLO THIRTY-TWO

The launch of the new CD32 machine marks the start of a new era for Commodore. When the existing A600s are sold through their warehousing and distribution chains, the entire Commodore range will be 32-bit AGA-chip set based.

This is the end of a long domination of the 16-bit home computer market for Commodore, and the start of their supremacy in the 32-bit field. Existing Amiga 500/600 owners need not worry, though. With an installed user base of well over one million non-AGA Amigas, software and hardware support for those machines will continue for a good number of years to come. In fact, almost all of the software being written to make the most of the AGA machines will still operate well on earlier Amigas.

The A600 is the last machine of a great era. From now on Commodore will be concentrating on 32-bit technology.

COMPETITION – WHAT COMPETITION?

Even though CD is the medium of the future, when the Amiga CD^{32} hits the streets at the end of August, it will only have one competitor. 3DO won't be on sale in the UK this year, Nintendo have no CD product in sight, and CD-i is a bit (read 'lot') of a joke. The only competition Amiga CD^{32} will have to take on is Sega's Mega CD unit.

Mega CD is basically a Mega Drive with an additional CD add-on, and it has received the full brunt of Sega's considerable PR power. From the Pirate TV advertising campaign that filled entire commercial breaks, to the hoards of hoardings plastered all over London and spread far and wide across the rest of the country, Mega CD has been hyped to hell. The only thing that has prevented Mega CD from being a roaring success is the fact that it's not really very good. Even Sega magazines gave the console a lukewarm reception, and although it costs £269, you have to have a Mega Drive to use it, which brings the total up to £369.

Let's take a look at the tech specs to see how the two units compare:

Commodore Amiga CD^{32} ### Sega Mega CD + Drive

Commodore Amiga CD^{32}	Spec	Sega Mega CD + Drive
Motorola 68020 32-bit CPU	**Processor**	Motorola 68000 16-bit CPU
14Mhz	**Clock Speed**	12Mhz
2Mb 32-bit	**RAM**	128K 16-bit
256 or 262,000	**Colours on screen**	64
320 x 256 minimum	**Screen resolution**	300 x 200
Composite, RF, S-Video, stereo audio, headphone	**Outputs**	Composite, RF, headphone jack
Keyboard, floppy drive, mouse, hard disk, full motion video	**Optional expansions**	None
£299.99	**Price**	£ 369.90
£19.95 (lowest), £29.95 (average price)	**Software prices**	£39.99 to £49.99

Commodore sought the advice of developers. According to one prominent programmer, in early units the flip top part of the console had fairly flimsy hinges. Commodore took notice and the production machines have a more durable build quality. Pre release versions are also said to 'wobble' on their feet – let's hope Commodore have sorted that out too.

Under the CD^{32}'s lid there are one or two surprises, designed to excite games developers, and entice them into developing for this new platform. A special circuit allows the machine to convert graphics from PC to Amiga screen formats on the fly. This enables programmers who have developed games for VGA PCs to port the graphics straight to the Amiga without going through time consuming conversion procedures.

Bullfrog's Peter Molyneux says this of the revolutionary technology: "Commodore's new machine is great. The way the screen is laid out is critically important. The Planar chip converts the PC screen into the plane mode on the Amiga – this makes a huge difference because you've got the best of both worlds."

So will the CD^{32} see a reversal of fortune for the fabulously successful A1200? "I certainly hope not," exclaims Commodore's David Pleasance, "we hope to take sales from the consoles, not from our own flagship machine. We have considered the possible effect on A1200 sales, and if they see a decline we have plans to protect the A1200's success."

But will the new machine make a difference to the way the A1200 is marketed? "I should think so," says David, "the A1200 is definitely *the* productivity machine." At this point Commodore's marketing manager, Dawn Levack, interjects: "But don't forget the A1200 is still one heck of a games machine".

We'd never disagree with that, in fact in next month's issue we will have a full, in-depth look at the Amiga games scene, plus a special on the CD^{32}. If you own a joystick, you will need *AF*51. **AF**

> **"** Amiga CD^{32} easily beats its rivals, with 256 colours, high CPU speed, the double speed drive and all that lovely RAM **❤**
>
> Andrew Hewson, 21st Century

COMMODORE ADDRESS DIFFICULTIES

Commodore's UK general manager: determined to put Commodore on top in the console market.
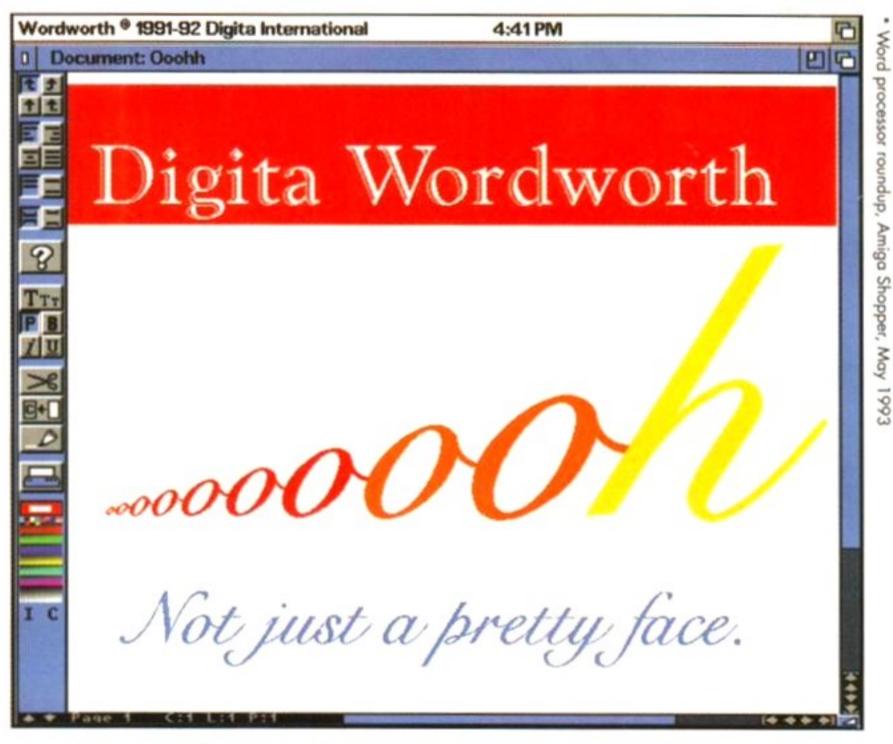
As we reported last month, Commodore have recently reported a significant loss. At the launch of the CD32, Commodore boss David Pleasance addressed this fact, and detailed Commodore's strategy to return to operating profit. Central to the new plan is the launch of the CD^{32}, but Commodore's financial fitness scheme doesn't stop there. They are going to cease concentrating on the production and marketing of PC-compatible machines and are giving the Amiga their full attention. This can only be a good thing for the Amiga community.

After a worldwide programme of rationalisation, Commodore have escaped the need to declare Chapter 11, an American system that protects companies from their creditors while restructuring occurs. The problem with Chapter 11 is that the creditors get to make the restructuring decisions. Commodore's own recovery plan was so thorough that their financial backers decided that the Big C were the best people to control the global restructuring of their own organisation.

Chapter 11 rumours have been circulating in the Amiga world for some time now, but this kind of uncertainty is bad for both Commodore and Amiga users. For Commodore it creates a lack of market confidence, which doesn't help share prices. For users it creates doubts about the platform, which in turn means that developers don't commit to the new machine. By dispelling these rumours and dismissing the gossip, David Pleasance has set the record straight. Now it's time for people to stop prattling, and get back down to some serious computing. The Amiga is the best platform available for the home computer enthusiast, and it will be around for years to come.

NEWS *brief*

HELPING HAND

If you've got problems with your machine, or you've been tinkering with it a touch too much, HCS Engineering are at hand to help you out. Give them a call first on 071-252 3553 — they might be able to help you over the phone, but if they have to work on your Amiga, labour charges start at £24.99.

ETHNIC TOUCH

Amiga users from the Middle East can now use video titles and paint packages in their own language thanks to four new font packages from Simkat. Distributed by American firm LCPS, the fonts are in Arabic, Assyrian and Persian, and each of the packages are compatible either with *Deluxe Paint*, *Video Toaster* and general video applications. Call LCPS on 0101 708 6787183.

LOLA UPDATE

LOLA Marketing, who brought us the MiniGEN genlock have updated their TV modulator for the A500. The modulator costs £29.95 and is packaged with a three metre lead, audio lead and a 12 month guarantee. Call 0858 880182.

NEW WORKBENCH

Workbench 3.1 is currently being tested by certain Commodore registered developers. There are no major new features, but there are a multitude of bug fixes and patches. No release date has been set, but it will probably be available at the end of the year.

MUSIC HELPLINE

Amiga music maestros, The Blue Ribbon SoundWorks, have set up a 24-hour telephone support service for users of any kind of Amiga music software. They also promise to answer all calls within four rings of the phone, so get dialing on 081-332 6959.

GOING LIVE

Live '93 is a new consumer electronics show, to be held for the first time at London's Olympia, 16-20 September. Tickets cost £7, call 071-373 8141.
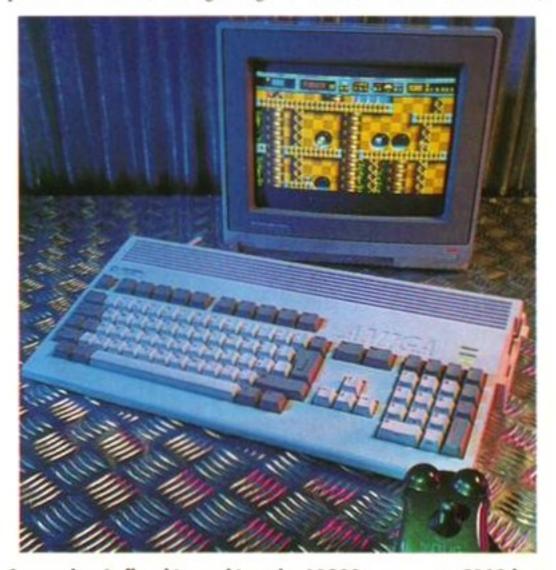
BUENOS DIAS

Authors or distributors of Shareware and PD programs can spread the use of their software to Spanish speaking Amiga users if they contact software library Atlantic Gold. Based in Gran Canaria, they cater for Spanish users by providing manuals written in their mother tongue for many Amiga software packages. Contact them on 010 34 773162.

More cuts from Commodore

COMMODORE HAVE ONCE again made a move in the right direction and have cut the price of the A1200 by £100 and the A4000/040 by £367.32. The A1200 will now cost £299 and the A1200 £2,099 (including VAT).

Although sales of the A1200 are close to 100,000, Commodore's target figure is 250,000, and the new price point is aimed at getting it there. David Pleasance,

Commodore's general manager, says of the A1200 cut: "We said at launch that we wanted this machine to become a mass market product. Thanks to its technical qualities and the acclaim of existing Amiga users, it's well on the way. The £299 price will speed that process up."

However, the new price of the A4000/040 was made, according to Commodore's national multimedia sales manager Mike Gosheron, to bring the A4000/040 more in line with the 486 PCs. "We've had the most successful quarter in high-end sales," he says. "The reduction in price and the launch of the 1942 monitor put Commodore at the forefront of desktop multimedia."

The price cut is welcome, with a comparable 486 PC priced at around £1,500, the reduction is still not big enough to give the A4000/040 the recognition it needs.

The prices of the A4000/030 remain unchanged at £999 for 80Mb HD and 2Mb of RAM, and £1,099 for 80Mb with 4Mb of RAM.

● Commodore's new 1942 Quadsync stereo monitor is reviewed on page 128.

Commodore's flagship machine, the A1200, now costs £100 less.

Now when you buy the A4000/040, the cost of VAT — £367.32 — has been cut.

Millennium lead CD³² development

SOFTWARE COMPANIES have long been preparing a host of games to take advantage of the Amiga CD console (see page 12). Millennium are the first to produce a game specifically for the machine. Called *Diggers*, it's a huge arcade/strategy game which involves mining for jewels and gold, and beating up your opponents in the process.

Programmer Toby Simpson explains: "*Diggers* has been written from scratch on the CD³² – it's not a conversion. There are six digital CD audio tracks, at least 256 colours used throughout, with 24-bit copper backgrounds. The 34 levels each consist of 32,000 locations, with seven terrain types. Because we didn't have to worry about the size of the game, we were able to go to town with the amount of graphics."

This paves the way for others to create games for the CD³², with all its advantages of lots of disk space, which can be accessed quickly. Also complete is a conversion of 21st Century's superb *Pinball Fantasies*.

"The new *Fantasies* takes advantage of the AGA chip set to create 256 colours – making it look like a real table," says Paul Topping of 21st Century. "There are also full CD-quality sound tracks for each."

Other games under production are mostly conversions from existing games, which take advantage of the superior hardware of the new machine. Bullfrog are planning three games: a conversion of *Syndicate*, with the ability to look inside the buildings and rotate the 3D view, and two brand new games, *Magic Carpet* and *Creation*.

US Gold are developing the cyberpunk-style adventure *Flashback* in conjunction with French software house Delphine. "We hope to get it out before Christmas," says US Gold's Bridgett Hirst. And Thalion are converting *Ambermoon* for a November release. Says Tony King of Thalion: "We will be taking advantage of the AGA chip set in the CD³² machine – maybe not fully, but we'll give it a damn good go."

Also in development are an updated version of *Nick Faldo's Golf* from Grandslam, who are also developing *England World Cup '94*

(assuming they qualify, that is!), and an enhanced version of Renegade's excellent *Chaos Engine*.

Commodore also say many other companies are developing titles for CD³² – Gremlin Graphics, Ocean, Team 17, Mindscape and Virgin Games. However, these companies are reluctant to release details, but we do know *Zool 2* and *Jurassic Park* are on the list.

The new version of 21st Centuries' *Pinball Fantasies* set for console colours.

Diggers is the first game to be developed solely for the CD³² console.

NEWS brief

CATCH A CARD

If you've had problems getting your hands on a PCMCIA memory card, Olivetti have put an end to that. They will be distributing Mitsubishi's cards and will provide support to their customers. Phone 0707 276100.

A LITTLE FISHY

Clip art producers Artworks have added two new disks to their range – *Fishing and Freshwater Life* and *Signs & Symbols 3*. Each disk has between 115 and 270 mono, IFF, bit-mapped, hi-res images on it and costs £6.99. Call 0469 588138.

INDI ON-LINE

Last month we printed the wrong phone number for direct mail order firm, Indi. The right number is 0543 419999.

CLOCKING IN

If you want to generate the on-screen clock that you see when the BBC get a program wrong, ZEN Computer Services could have just the thing. Their VTClock program can be used to create ident clock screens and generate a 1Khz tone, so you can ensure all is working before you broadcast. Call 061-793 1931.

TEE SERVICE

Want a T-shirt of your fave Amiga game character? Outer Limits, are selling shirts bearing characters from *Zool*, *Lemmings*, *Streetfighter 2*, *Chuck Rock* and *James Pond* (£7.99-£9.99). And we have 10 of them to give away. Simply write in on a postcard marked Gimme A Tee Comp at the usual *AF* address, stating the character and size you would like. Entries in by 14 September. If you don't win, call 0272 768989 to order one from Outer Limits.

ROBOCOD RETURNS

Millennium are offering *AF* readers who own the original *Robocod* a low-cost upgrade to the AGA version. All you have to do is you send original disks plus £9.99 (cheques or PO payable to Millennium Interactive Ltd) to the address below. Normally the game would cost £25.99, so it's a real saving! *Robocod* Upgrade, Millennium Interactive Ltd, Quern House, Mill Court, Great Shelford, Cambridge CB2 5LD.

FES: even bigger and brighter

The second Future Entertainment Show

LAST YEAR, WHEN the Future Entertainment Show grew three times the size of the previous year, we all thought it was the biggest and best thing yet. And that growth continues – this year's extravaganza will take place at the larger Olympia Exhibition Centre, covering around 20,000 square feet and including 150 exhibitors, and it will be the UK's biggest leisure computing exhibition!

Organisers Future Events have the additional backing of Hewland International, who have merged their GamesMaster Live show with the FES, and will be creating and staging the live events at the show.

"We are combining the event because it is in the best interest of both the industry and ourselves," says the organiser's director, Tony Keefe. "We have a unique opportunity to build a platform so significant that it will provide the industry with the springboard for the next major leap forward."

And the industry agrees – most major UK manufacturers see the FES as their main showcase of the year, and say that the merger also makes more sense for the consumer.

The show will take place on 11-14 November – a prime time for hardware and software companies to show off their new wares and just right for consumers to buy all those Christmas gifts.

The price of tickets has not been set yet, but with more than 60,000 people expected to attend the event, they're bound to sell out quick. A credit card hotline has been set up for the show. To book your tickets call: 051-356 5085. Expect more details of the show in future issues of AF.

Sumner guides Gametek's growth

RECENTLY BOLSTERED BY the expertise of ex-Commodore MD Kelly Sumner, software distributor, Gametek are making major moves in the industry. Not only have they just signed a worldwide deal with Konami, securing their UK and US rights to the Amiga range, but they have also signed seven new publishing partners in the US market, and have opened a UK office, with German and French bases to follow shortly.

Just three months in the job and Sumner is certainly having a positive effect. "We are now a major player on all of the most significant formats in all of the key territories in the gaming world. The agreement with Konami will help us continue our explosive growth pattern," he boasts.

The Konami deal sees *Batman Returns* being released in October for £24,99, and two Gametek US games – *American Gladiators* and *Bill Elliot's Nascar Racing* will be released in September for £24.99 and £14.99 respectively.

The signing of the seven new publishing partners also means Gametek will now be handling US sales and distribution for labels such as Gremlin Graphics, Renegade Software and Revolution Software. Gametek are on 0753 553445.

DOUBLE DEALS

TWO LEADING PRINTER manufacturers are offering software deals to Amiga users this summer. Anyone who buys a Citizen Swift 240C (£422) or 240 dot-matrix printer before 30 September can claim a copy of Softwood's word processor, *Pen Pal*, worth £58. To qualify, customers must complete a claim at the dealer they bought the printer from and they must provide proof of purchase.

Not to be out done, Panasonic have come up with a similar deal, but this time offering Digita International's *Wordworth 1.2*, worth £129.99, to all buyers of Panasonic Quiet or laser printers.
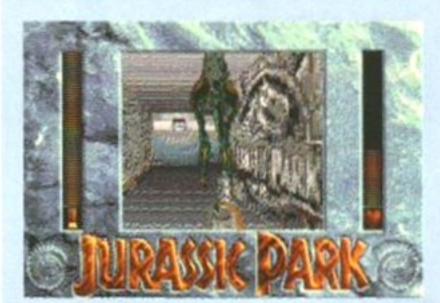
A Panasonic laser printer was also up for grabs from Digita, who offered one as a prize to people who took part in a questionnaire designed to help Digita with the development of *Wordworth 3*. The winner is Jan McGrath from Colchester, Essex.

Call Citizen on 0753 584111 and Panasonic on 0344 862444.

TYPE NO MORE

FOR £49 YOU can cut out the time consuming job of typing in all documents. Power Computing's Power OCR uses accurate Omnifont technology, recognises more than 20 typefaces, and can read 10-18 point fonts from typeset, typewritten, laser-printed and NLQ dot-matrix printouts. Call 0234 843388.

JURASSIC

The 3D section of *Jurassic Park* (which you won't find on the console-toys) is a tense thrilling tour around a texture-mapped maze...

...while the arcade-style part is a *Chaos Engine*-style romp around 11 different levels. Here you see a Rex having a light lunch.

It's AGA captain...

INTERPLAY, CREATORS OF the recent hit *The Lost Vikings* (AF49, 79 per cent) have announced three new games to be released in September, two of which are A1200 and A4000 only.

The first is good news for all Trekkies out there. *Star Trek: The 25th Anniversary* will be a combination of a 3D space flight simulation, with various role-playing adventures thrown in for good measure.

Next up is a sequel to the *Lord of the Rings* (AF30, 72 per cent). Based on JRR Tolkien's trilogy, *The Two Towers* picks up where the first game left off. Again in a role-playing game style, the game uses digitised speech and 256-colour graphics, along with an enhanced interface.

Lastly, another sequel. *Castles 2: Siege and Conquest*, a medieval strategy game, is to be released in both A600 and A1200 formats.

More details

The new generation of Star Trek is to see the light of day on the amazing Amiga 1200.

Commodore set for fast new system

RUMOURS HAVE RECENTLY been circulating in the various E-Mail networks concerning the next new machine to be released, allegedly called the A5000. The specifications of this are impressive, with a 68060 CPU and two 68040s to handle screen and sound. However, Commodore have denied these rumours, but say that it's likely that there will be a 68060 based Amiga within the next year.

In the long run, Commodore are working towards creating a RISC (Reduced Instruction Set Coding) based Amiga. This would not only give a vast speed increase, but would also introduce the possibility of creating a system which could be both an Amiga (running a new version of Workbench) and a PC, via Microsoft's Windows NT (New Technology).

Although this machine is still in development, it looks likely that it could be at least five times faster than a Pentium (the latest in Intels X86 series, used in all PCs) based machine.

Modems to make use of PCMCIA slot

PARK

YOU'VE PROBABLY HEARD all about the film, but the game is still under development. Ocean software have been working for over 18 months on it, and it's due for release in October.

Ciaran Brennan of Bastion, Ocean's PR company, says: "Although *Jurassic Park* is an action game, it leans more towards strategy rather than just shooting things. Amblin – the film's distributors – didn't want dinosaurs being shot in the game, so when the T-Rex attacks, it's more a case of getting away rather than killing it."

There are two different styles within the game. The first is isometric 3D with lots of different dinosaurs, 11 levels, and lots of sub-games. The second is a first-person 3D section in the style of the recent *Legends of Valour*, using texture-mapped graphics. Ciaran says: "We couldn't do the 3D section with the kiddy-type consoles, but we can with the Amiga."

And indeed they have, because we recently received a demo of the game, and it's looking excellent. Ocean are on 061-832 6633.

US ROBOTICS HAVE announced two innovative modems which fit into the PCMCIA slot. Both were designed by French PCMCIA experts PNB, who US Robotics bought out in April. The Worldport 2496 offers speeds of up to 2,400-bits per second, with full fax send and receive capability, while the Worldport 14,400 can send and receive data at speeds of up to (surprise, surprise) 14,400-bits per second.

On top of this, it includes V42 bis data compression and high-speed fax send and receive. The list price for the Worldport 2,496 is £399 and £599 for the Worldport 14,400.

However, these modems will not work on the Amiga without a software driver to allow comms programs to access the PCMCIA slot, and US Robotics have no plans to write this software. This means that once again Amiga users will be missing out on the benefits of having a PCMCIA slot.

If you are one of the 240,000 A600 or A1200 users who would like to use that slot on your machine for something other than memory, write to US Robotics at the address below asking them to produce a software driver for these modems. Clive Hudson, Sales & Marketing Director, US Robotics, 224 Berwick Avenue, Slough, Berkshire SL1 4QT.

Adore Adorage?

IF YOU ADORE *Adorage*, then you'll love this. On *Amiga Format* issue 48's Coverdisk we featured a working demo of Micro-PACE's excellent video effects titler, *Adorage*. Now we've got together with Micro-PACE to offer *AF* readers a special deal for the full version, at a discount price of £59.99.

AMIGA FORMAT

Creating video titles with Adorage is easy and effective.

Not only is this deal £20 cheaper than the recommended retail price, but it also includes full technical support and a manual to help you make the most of all the titling effects you can create.

All you have to do to take up this offer is to fill in the coupon below and send your payment to:

Adorage Offer, *Amiga Format* Mail Order, Future Publishing, Carey Court, Somerton, Somerset TA11 6TB.

This month's top 30

ELSPA PENGUIN CHARTS COMPILED BY GALLUP SPONSORED BY PENGUIN BISCUITS

1 (-)	New	**Flashback** US Gold	FG93%
2 (11)	▲	**Championship Manager 93** Domark	82%
3 (1)	▼	**Desert Strike** Electronic Arts	87%
4 (16)	▲	**Graham Gooch Cricket** Audiogenic	78%
5 (-)	New	**A-Train** Ocean	84%
6 (5)	▼	**Reach For The Skies** Virgin	FG90%
7 (6)	▼	**Sensible Soccer 92/93** Renegade/Mindscape	80%
8 (4)	▼	**Premier Manager** Gremlin	87%
9 (2)	▼	**Body Blows** Team 17	87%
10 (3)	▼	**The Chaos Engine** Renegade/Mindscape	FG90%
11 (8)	▼	**Lemmings 2** Psygnosis	FG94%
12 (9)	▼	**Superfrog** Team 17	85%
13 (10)	▼	**Streetfighter 2** US Gold	87%
14 (12)	▼	**Wing Commander** Origin/Mindscape	83%
15 (7)	▼	**B17 Flying Fortress** MicroProse	FG91%
16 (-)	New	**War In The Gulf** Empire	78%
17 (-)	New	**Scrabble** US Gold	84%
18 (18)	■	**Monkey Island 2** US Gold	FG95%
19 (13)	▼	**Sleepwalker** Ocean	FG91%
20 (14)	▲	**Formula One Grand Prix** Electronic Arts	FG92%
21 (21)	■	**Indiana Jones – Fate of Atlantis** US Gold	FG92%
22 (22)	■	**Civilization** MicroProse	FG94%
23 (20)	▼	**PGA Tour +** Electronic Arts	Comp
24 (17)	▼	**Graham Taylor Soccer Challenge** Krisalis	82%
25 (29)	▲	**John Madden American Football** Electronic Arts	FG94%
26 (24)	▼	**KGB** Virgin	FG91%
27 (19)	■	**History Line 1914-1918** Blue Byte	FG94%
28 (-)	New	**The Greatest (Compilation)** Beau Jolly	FG91%
29 (15)	▼	**Nick Faldo's Golf** Grandslam	FG90%
30 (-)	Re	**Road Rash** Electronic Arts	84%

BOOM-ERANG!

THE EXCELLENT PLATFORM game *Nicky Boom* (AF42, 88 per cent) is to be joined by a sequel, *Nicky 2*, from Germany-based Microïds. The new game promises to have more of everything – smoother animation, over 40 monsters and more puzzles. *Amiga Format* considered the original to be light and fun, so *Nicky 2* should be one to look out for. Watch out for a review in next month's issue. Daze Marketing 071-328 2762.

Boom's back with a brilliant, bouncy, baffling, bulldog of a game, to bowl you over. Bravo!

Interactive TV looms

RENEGADE HAVE SIGNED a deal with Triton Interactive Television to convert their whole library of Amiga games for playing on TV via the telephone.

The new technology, developed by Triton, enables you to play games via a telephone line connected to a live TV broadcast. Using the keypad of a normal phone, you can control the games as you would with a joystick, and each game will be specially adapted to work with the system.

Play Your Cards Right and you could Strike It Lucky playing Sensible Soccer over the telephone…

Renegade's catalogue of games includes the best-selling *Sensible Soccer*, *The Chaos Engine* and *Speedball 2*, which are all multiplayer games already, and so are natural choices for conversion to the television format.
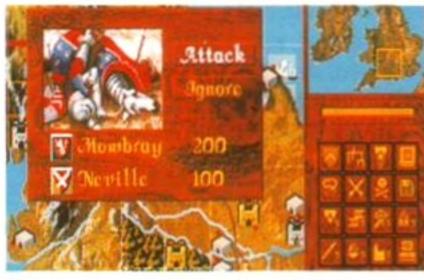
Renegade's Tom Watson described the deal as: "A real opportunity… for Renegade to demonstrate its leadership in the publication of original computer games."

Contact Renegade on 071-481 9214.

…or if it's not a Question of Sport you could try and Double Your Money playing Speedball 2. Fifteen-To-One you don't.

ON THE THRONE

"If I was King for just one day, la la la dum dee dum dum dum…" Let's hope US Gold's new game is better than the Thomson Twins' song!

THE NEXT GAME from US Gold will be *Kingmaker*, a strategy game based on the boardgame of the same name. Set in the time of the War of the Roses, *Kingmaker* has been programmed by Graham Lillee, whose previous work includes *Shadow Sorcerer*, with graphics by Kevin Bulmer of *Legends of Valour* fame.

The idea of the game is to build up the ranks from a soldier, dealing with horrors including plague and battles, with the ultimate goal of becoming king of England.

Call US Gold on 021-625 3388.

Toon time

Another cute platformer hits our screens in the form of Cartoons. Can it beat Yo! Joe!?

NEW FROM FRENCH softies Loriciel is *The Cartoons*, a platform game based around two characters which join together to solve puzzles. One is very clever, but a little weedy, while the other is very strong, but lacking in intelligence. Together they must make their way through 21 levels of monsters and mayhem. Review next issue.

Loriciel are on 010 331 4688 2838.

UNITED FIND NEW GAME

MAN' UNITED FANS take note: Krisalis are shortly to release *Manchester United – Premier League Champions*, a top-down football game in the style of *Sensible Soccer* and *Goal!*. Tim James of Krisalis assures us that the game has been in production since January, it will include several innovative features, and it will not just be a cash-in on the team's success. Krisalis 0709 372290.

Second coming

Molten lava coats the first level, where you'll be faced with snakes, armadillos and strange brown karate-kicking blobs. This is what comes of having a Vivid Imagination, I suppose.

THE NEXT BIG THING?

"Give me back my jelly baby this instant or I'll tell Mummy." The first samurai shows that under his hard exterior, he's a child at heart...

Vivid Image are nearing completion of their sequel to one of the most playable arcade adventures ever, Second Samurai. **Andy Nuttall** fought and kicked his way into deepest Harrow to find out more...

AFTER *FIRST SAMURAI* fell victim to Robert Maxwell and the demise of his Mirror Group empire, Mev Dinc and the boys from Vivid Image were understandably annoyed. After many years of hard work, their game had been given a shelf life of just one week, then the antics of Cap'n Bob saw to it that the game was no more.

First Samurai obviously wasn't the only game to be hit by the collapse, but given that the game had commanded almost unanimous rave reviews only weeks previously, this was something of a disaster for Vivid Image.

Instead of being fazed by the events, the Vivid Image boys got on with the sequel, *Second Samurai*, which is almost complete. Having signed the publishing of the game over to Psygnosis, who were recently bought by Sony, perhaps Vivid Image have a little less to worry about this time around.

Like the original, *Second Samurai* is a clever mix of arcade-style action, adventure, and puzzle genres. You play a samurai warrior who is stuck in a world filled with nasties. These are as diverse as they come, ranging from bees to armadillos, skeletons to

Samurai deflects the wall of fire by threatening it with his fists... Er, not, actually. It just flies that way. Looks good, though.

Baddies like this don't just crop up at the end of levels, they hassle you throughout the game.

huge stone heads, and dragons to small brown lumpy things which drop-kick with venom.

Although it doesn't offer much in the way of original plot, it comes into its own in terms of gameplay. Control of your warrior is smooth and intuitive, and the joystick is always responsive. Well-drawn backgrounds complement the character sprites, which use lots of animation frames to create fluid movement, and the screen scrolls to keep the main players visible, even in two-player mode. Two players may play simultaneously, with three different two-player options: Friendly, where neither player can hurt the other; Stun, where a kick or punch will stun the opponent for a few seconds; and Kill, where you can beat up your opponent.

The 10 levels are very large, and split into three: Twilight, the level illustrated here; a Space Station, where you'll find a time-warp facility enabling you to get to Traditional Japan (the last level). Here you will meet the final demon, whose defeat marks the end. Most levels have one or more sub-games, where you must complete a task to gain experience points, which are totalled up at the end of the level.

Instead of each level loading in separately, a load only takes place at the end of an area – so disk accessing is kept to a minimum. Mev says: "Disk swapping and accessing can spoil a game, so we've tried to go for a more console-style approach where as much as possible is stored in memory."

Watch out for the next issue of *AF* – it will feature an exclusive playable demo of *Second Samurai* – so you can play it for yourself! Believe me, you won't be disappointed. **AF**

The second samurai, in an attempt to defeat the hideous skeleton by making it laugh itself to death, models a new type of hat.

Classic gold

AMIGA GOLD FORMAT

To celebrate the 50th issue, we've picked out the 50 most memorable Golds. Ex-editor Damien Noonan explains why their names are still up there in lights...

TOP GOLD SCORES OF ALL TIME:

1   **98 PER CENT**
      Directory Opus 4 in AF45
2. **97 PER CENT**
      AMOS Professional in AF40
3. **96 PER CENT**
      OpalVision in AF41, *Real 3D 2* in AF46

NUMBER OF GAMES GOLDS AWARDED:

YEAR ONE, AF1-12
      26 Golds out of 216 reviews
YEAR TWO, AF13-24
      27 Golds out of 264 reviews
YEAR THREE, AF25-36
      26 Golds out of 294 reviews
YEAR FOUR, AF37-48
      22 Golds out of 290 reviews

WHAT GOT THE highest ever review score in *Amiga Format*? It's one of those questions, like 'Who had the most successful hit record?', that you just can't help feel is important... but the answer could be disappointing.

Follow that pop music comparison. Most weeks at number one? It was that God-awful US adult-pop number from the Robin Hood movie, wasn't it? Either that, or Paul McCartney's dirge *Mull of Kintyre*. Yuck!

Highest score ever in *Amiga Format*? A utility program to help you organise your disks and files, the Workbench-replacement *Directory Opus 4*, awarded 98 per cent in issue 45. Would you believe it? In second place is *AMOS Professional* – a programming language! – with 97 per cent in issue 40. Yawn!

But please, stay tuned. Do not adjust your set. Glamour, after all, isn't everything. These may not be 'sexy' items, but they are top scorers for good reason – basically, because they're getting close to being perfect at what they do. After eight years of the Amiga, things have got better and better as developers build on the experience of what's gone before.

Does that mean there could soon be a 99 per cent score, or even a perfect 100? Well, I doubt it. Our stan-

dards change. The Amiga is moving on, so while we might have been close to the perfect programming language or paint package for the A500, it's going to be a while before a near-perfect A1200 program appears.

Every year we expect more, so average review scores, like investments, can go down as well as up. But whatever the pattern of scores, things are always getting better. Three years ago, our suggestion for a dream beginner's set-up would have been an A500 with a GVP HD8 hard drive. Now, it would be an A1200 with built-in IDE drive; quicker, smarter, lighter, more colours.

And now here we are, celebrating 50 issues of *Amiga Format* by taking another look at 50 of the games, the software and the hardware that have received the prestigious (and coveted) *Amiga Format* Gold award. All are worth getting hold of, even the oldies, so in one sense you could look on this as the complete Amiga buyer's guide. Investment advice: put your money in Gold.

These 50 are hand-picked for historical interest. Each has a story to tell. Some are brilliant new ideas, some are old favourites we just couldn't leave out, others are controversial, bizarre, or inspiring. All are of the highest quality. Not a *Mull of Kintyre* among 'em...

Getting into

What's the first step for an Amiga owner who wants do more than just play games? Well, start humbly with a printer and a word processor and before long you'll be a publishing tycoon…

If anyone can, on paper...

…Canon can, so they claim. Although best-known for programmable cameras and photocopiers, they've made one major contribution to the computer scene.

Canon invented bubblejet printers only two or three years ago and, because they have control over the technology, all bubblejets with other makers' names on are Canon machines underneath. The fact that we've only got two printers among these 50 Golds and they're both Canon bubblejets shows how good they are.
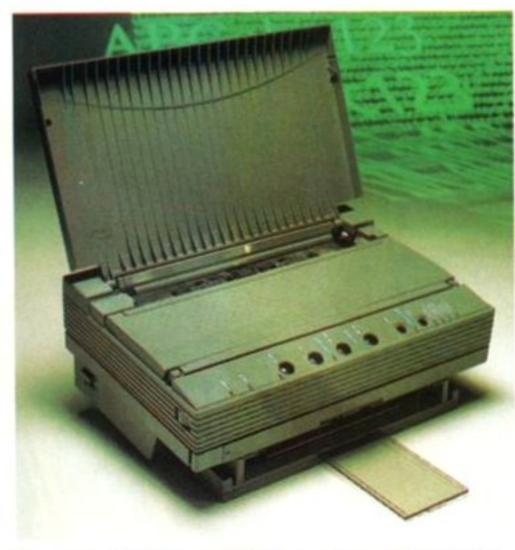
Bubblejets give almost the quality of a laser printer, 360 dots-per-inch resolution, at less than half the cost (£230 for a bubblejet, £600 for the cheapest laser).

Small, smart-looking, lightweight, very quiet and of an equivalent quality to the top-of-the-range laser printers, is the bubblejet the ideal printer? Almost. Sadly, bubblejets are mono only, though apparently the makers are working to invent a colour version. It's a difficult task, but if anyone can do it…

CANON BJ-20 95% AF39

For some reason, we never reviewed the first bubblejet, the BJ-10: so this, its successor, was the first one we officially rated. Suffice to say that in a feature which tested and compared every kind of printer, from the cheapest dot matrix to the most expensive colour inkjets, this got the highest rating of all.

The Canon BJ-20 bubblejet printer was originally available at £227.99, but has now been superseded by the BJ-10SX.

The Canon BJ-20 is one of the best value quality printers you can buy for your machine.

CANON BJ-10SX 95% AF48

The latest in the Canon range are this new entry-level model, a compact design which can be used portably under battery power, and the equally excellent BJ-200, a stand-up desktop design which features a 'super high quality' mode that gives denser, more solid print-outs. Both printers come highly recommended.

The Canon BJ-10SX and BJ-200 bubblejet printers are both available from Phoenix Computer World, 0532 350091, priced at £227.99 and £349.99 respectively.

Worth a thousand words

PROFESSIONAL DRAW 3 92% AF39

Hand in hand with computer-based design, DTP, there came a need for computer-based illustration. A structured drawing package can be used to create pictures and line drawings for any purpose, but it's at its most useful in DTP where it can do things like re-shape text to make fancy headlines.

From Gold Disk, of DTP package *Professional Page* fame, *Professional Draw* is probably the only structured drawing package really to have made the grade on the Amiga. For a short while it had some competitors, but it soon saw them off with this, its latest incarnation, in September 1992. Since then, it has reigned supreme.

Structured drawing is a highly specialised tech-

YOU, THE DESIGNER AND PUBLISHER

PAGESTREAM 2.2 91% AF34
One of the most radical impacts of the computer has been in the design and publishing professions, where the previously complicated processes involved in writing, type-setting and laying out the pages of a magazine have been vastly simplified by the DTP (desktop publishing) program.

We should know: it's what we do for a living. We use top industry-standard DTP software on powerful Macintosh computers to make this magazine. As such, we're good judges of DTP programs and for a long time we doubted any Amiga package could cut it.

Top Amiga DTP experts were Gold Disk, with *Professional Page*, but all that changed when a rival emerged in the shape of *Pagestream 2.2*. All of a sudden, professional-quality Amiga DTP made sense.

WISE WORDS, MATE!

PROTEXT 5.5 90% AF28

A word processor is essential for letters, newsletters, homework, essays or stuff from the office. There's only one choice when it comes to an Amiga word processor – *Protext*.

It's not subtle, but it's very effective. It's difficult, with an eccentric system of menus, but when you've sussed it, it's fast and packed with features. *Protext* doesn't offer a 'what you see is what you get' system, so in truth it's outdated. But it's earned a place in our history.

Protext, the most effective and fastest word processor around.

Protext 5.5 was published in October 1991 by Arnor at £179 and is still available direct from them on 0733 68909.

What you see...

WORDWORTH 2 91% AF41

On the screen is an A4 page with lots of smart type and pretty pictures: and when you print it out, it is exactly the same. Another advantage of *Wordworth 2* is that the makers, Digita, are available to help you out.

Times and standards change and people expect more and more from the simplest types of program. The standard now for word processors, set by professional programs on the Mac and PC business computers, is WYSIWYG: 'what you see is what you get'.
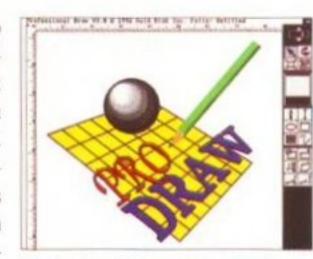
It's a simple enough idea: if you want to print out a piece of A4 paper with lots of smart type and some pictures, then what you want to see on the screen is a realistic representation of a piece of A4 paper with lots of smart type and some pictures.

You can type the words

print

nique, difficult to master and very different from paint packages such as *Deluxe Paint*. Drawings are created from solid lines and curves, which can be bent and reshaped at any time and are used in layers to build up a line drawing. This drawing can then be coloured by filling in the spaces. The advantage is that whatever size you print it at, the drawing will only gain quality, it won't lose it as a painting will.

Professional Draw 3 is your first choice if you wish to produce high-quality line-and-curve based illustrations, especially for print.

It's a tricky program to get into, but it's rewarding. Would you like to be one of the few top-class illustrators working on the Amiga? Try it!

Professional Draw 3 is published by Gold Disk and is available in this country at £99.99 from HB Marketing on 0753 686000.

Marcus, himself, our art editor before he took the helm, was finally persuaded that it would be possible to create AF on an Amiga. Since then, DTP packages have moved on further.

Pagestream 2.2 showed for the first time that the Amiga could really cut it professionally.

Current tops is Professional Page 4 (94 per cent Gold in AF46), but PageStream 2.2 marks the point where the Amiga became credible at the sharp end of computing.

Pagestream 2.2 was first published in April 1992 by Soft-Logik and sold in the UK at £199 by Silica on 081-309 1111.

straight on to your on-screen page, play around with the size, style and placing of the words and pictures until it looks good, then simply print it out. Easy.

Technologically, though, it's not easy. It's very complicated and requires lots of computing power, as well as such fancy extras as Postscript-type scaleable fonts. Amiga programs couldn't hit the standards achieved by Mac and PC software – until the A4000 and A1200 arrived and Wordworth 2 appeared.
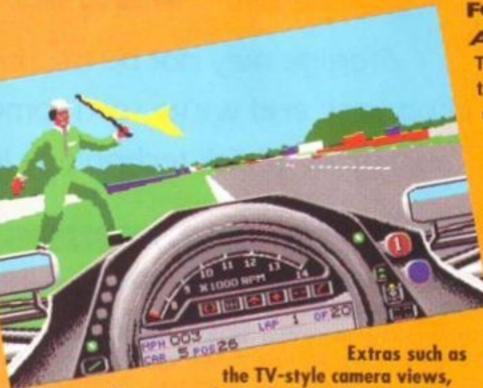
With everything a word processor needs plus many of the layout features of a DTP package and a WYSIWYG approach, this is a winner. Above all, the aim of productivity programs should be user-friendliness and ease of use, and these Wordworth has in abundance. It's lovely!

Wordworth 2 runs best on AGA machines and is available for £129.99 direct from publishers Digita on 0395 270273.

THERE ARE ONLY THREE KINDS OF GAME...

Here's a thought: you can divide computer games into three types according to how they work. Let me explain with the aid of these classic examples...

SPEED...

FORMULA ONE GRAND PRIX 92% AF32

Type one, the most complex, is the 3D game, in which the whole game-world is a 'virtual reality' inside the computer modelled by three-dimensional coordinates. This makes 3D which is perfect for simulations.
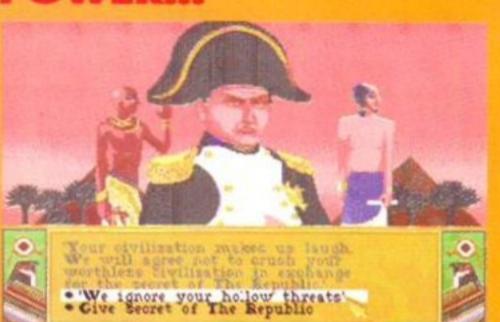
Once flight sims were tops, but now the king is a driving game from 3D pioneer Geoff Crammond. His first game *Revs*, which I remember on the BBC Micro way back in – what? 1981? 1982? – was the original 3D sim, detailed and exciting. Its authenticity was vouched for by a top racing driver who gave advice in the manual on how to drive the different circuits.

In early 1990 Crammond hit the Amiga with the thrilling *Stunt Car Racer*. Two players piloted cars on a roller-coaster course way above the ground, each trying to smash the other car off the course. Crunches and plunges were sickeningly real, but, best of all, the two players were on separate,

Extras such as the TV-style camera views, giving you replays of your 180-mph shunts, make Formula One Grand Prix a supremely enjoyable game as well as a highly realistic simulation.

cable-linked Amigas, each seeing the view from his own car. Astonishing. And then came *F1GP*. The realism is stunning, down to the set-up of the wings. And yet it's not intimidating: the graphics make it temptingly attractive, while ample options make it a playable game for non-mechanics. Superb!

Formula One Grand Prix, first published by MicroProse at £30.99 in February 1992, and is still available.

POWER...

CIVILIZATION 94% AF38

The second type is the oldest, born of the text adventures written by Sixties students. Here, the data inside the computer is the important thing, not the presentation. Data games depend on words or statistics, so requiring imagination (adventure games) or intelligence (strategy and puzzle games).

Gradually graphics became more important, and now the 'point-and-click' idea underlies all adventure, strategy and puzzle games. But it's still the ideas that count and Sid Meier, American author of *Railroad Tycoon* and *Civilization*, is the expert in intelligent games for older players.
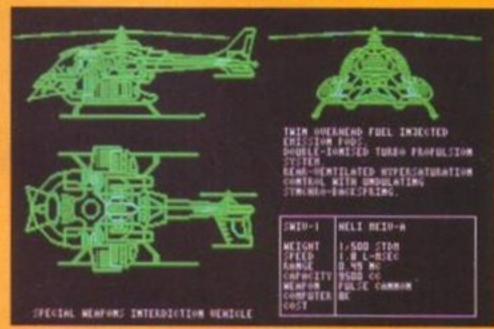
Hard to believe that our first Reviews Editor, Andy Smith, a man of many words but very few

Civilization must be the ultimate challenge. Well, could you succeed in bringing a race of people from the iron age to the space age...

O-levels, could waste quite so many work hours building a railway network, or spend long nights defending his people from Roman invasion. Yet such is the engrossing nature of these games. What's the appeal?

It's partly the test of brain-power, logic and reasoning that you need to succeed. And it's also the atmosphere, the sense of involvement as you try to help your tribe develop technologies to fight off its competitors and advance through history. And there's just a touch of megalomania there, too.

Civilization was first published by MicroProse at £34.99 in August 1992 and is still widely available.

...AND ALL-OUT MEGADEATH!

S.W.I.V. 92% AF21

Want to know why so many games are based on violence, encouraging tabloids and MPs to claim games are corrupting our minds? It's because they're type three games, or screen games.

All these really do is draw objects on the screen, whizz them about, and work out when one has banged into another. Whatever the object, be it a bat and a ball, spaceship, missile or a fighter and a fist, it doesn't matter. It's a contact sport.

As soon as someone realised that spaceships are more interesting than table-tennis bats, the shoot-em-up was born. When the A500 Plus arrived in November 1991 and refused to run many games, it was the loss of a shoot-em-up that caused most distress. "Should I get one of these new Amigas?" people asked us. "Not if you want to play *S.W.I.V.*" Marcus would answer. It wouldn't run. I was the last great shoot-em-up. R.I.P. *S.W.I.V..*

S.W.I.V. had everything – big weapons, explosions, lots of skin-of-the-teeth escapes and a fine balance between enemy firepower and your own power-ups. Mayhem.

S.W.I.V. was published by Storm at £24.99 in April 1991 but was never updated to work with the A500 Plus, A600 or A1200. It remains a piece of history.

Memory like an elephant
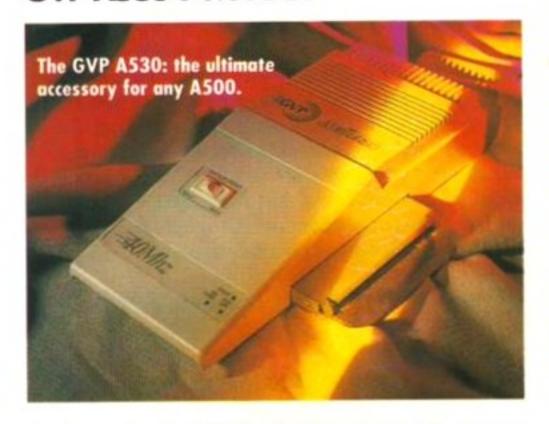
Storage may not be the most glamorous thing, but it's important; and we've seen some astonishing examples of disk technology in our time…

Hard and fast

GVP A530 94% AF39

The GVP A530: the ultimate accessory for any A500.

Let's face it, the A500 is looking dated. The A1200 is faster and its chips give it more colours. But if there's one way of keeping your A500 up with the pace of technology, it's to sling one of these on the side: hard drive, RAM expansion and 68030 accelerator all in one!

When most of us had A500s, the one piece of hardware *AF* would always recommend was an HD8+ hard drive from GVP. They provide the speed and storage advantages of hard drives up to 120Mb, and slots for up to 8Mb of RAM.

Then GVP produced an A500 accessory that could speed your Amiga up from 7MHz clock speed to 40MHz – still the best piece of A500 hardware. The GVP A530 accelerated hard drive for the A500 and A500 Plus is available from Silica on 081-309 1111 – prices from £499 for a 42Mb version.

God, it's enormous!

POWER MAGNETO OPTICAL 95% AF44

Big is getting more and more beautiful. Soon, games will be coming on CDs containing 650Mb of data: already, 'true colour' 24-bit pictures and DTP pages with pictures in can be anything from 3Mb to 20Mb each. You'll soon run out of room on even a 120Mb hard drive, so where do you store all this stuff? And if you need to pass it to someone else, clearly a 1Mb floppy disk is no good: what do you do?

The answer, already in use in many professional environments, is a disk drive that uses removable cartridges which can store around 100Mb each. One popular type is the magneto-optical system, which is a cross between a read-write CD and a normal magnetic drive. Data is written by a laser beam, but stored and read magnetically.

These drives seem extremely expensive, but the cost per megabyte of a drive that clocks in at £1000 with cartridges at £35 each is actually cheaper than using floppies. And let's face it: if you're using files that kind of size, you need it. One last word: the internally-fitted version of this drive, which slots in the 5.25-inch drive bay of an A1500, A2000 or A3000T, is much better value.

Power's Magneto Optical Drive is available from them on 0234 843388 at £999.95 for the stand-alone version or a much more reasonable £799.99 for the internally-fitted model.

It's extremely dull-looking, but Power's magneto-optical drive is seriously high-tech underneath and the modern way of getting massive data-storage capacity.

Yes, it's huge!

SYQUEST IDE 95% AF49

Like the magneto-optical drive, this system is intended to solve the problems of professionals who have to store vast quantities of data. SyQuest systems are used all over the place; here at *AF* we have SyQuest drives for our Apple Macs, to store the finished DTP pages of all our back issues.

The SyQuest drive is essentially a hard drive, except that the hard disk is encased in a cartridge that means it can be flipped out, just like a floppy disk. The one danger is that they can be rather delicate. The unique thing about this new drive is that it is controlled by the IDE system, so it's designed for the new Amigas. It fits perfectly inside the 3.5-inch drive bay on an A4000 and a stand-alone, cased version is promised soon for the A1200. The advantage of IDE is that this drive is very cheap compared to other SyQuest drives using the older SCSI system; about half the price in fact.

The SyQuest IDE drive is available for around £500 (price not yet confirmed when going to press) from Power Computing on 0234 843388.

Cheap insurance

VIDEO BACKUP SYSTEM 93% AF45

We'd recommend that every Amiga owner has a hard drive, but there's one snag. You tend to come to believe that your hard drive is totally reliable and will never lose your data. Not so.

A good example is what happened one issue of *Amiga Format*. A few days before print deadline, with 80 per cent of the pages laid out, Marcus's hard drive had a 'head crash'. This is a rare occurrence but is usually fatal. Marcus lost everything and three weeks of work had to be done again in three days. Nightmaresville.

The only way to be quite safe is regularly back-up your drive: copy all the data on it to another place of storage. You can get software that will painstakingly sort all your data on to dozens of floppy disks, but that's slow; the alternatives are an expensive gadget called a tape streamer, or simply a second hard drive.

But here's a clever option: video tape makes a perfect storage medium and so, using the software and leads in this package, you can back-up your drive using your video recorder. It's quick, easy and very reliable: a bargain for all hard drive owners.

It doesn't look very glamorous, but for relatively little money the Video Backup System can ensure that you never lose data from your hard drive. You should have one.

Described by Pat as "the hottest drive to hit the Amiga scene in 1993", the SyQuest IDE drive brings the storage and convenience of removable cartridges to the A4000.

Twice as nice

The very first high-density disk drive for the Amiga means you can squeeze twice as much data on a single floppy disk.

HIGH DENSITY DISK DRIVE 93% AF48

A second disk drive means you can copy stuff easily from one disk to another, just for starters. We've never seen an outstanding disk drive… till now.

Mac and PC owners have been able to use high-density HD disks in their HD drives and get twice as much data on one floppy. Commodore caught up by putting a HD drive in the A4000, and now, if you've got a 1200, 4000 or A600, you can have a high-density second disk drive and store twice as much stuff.
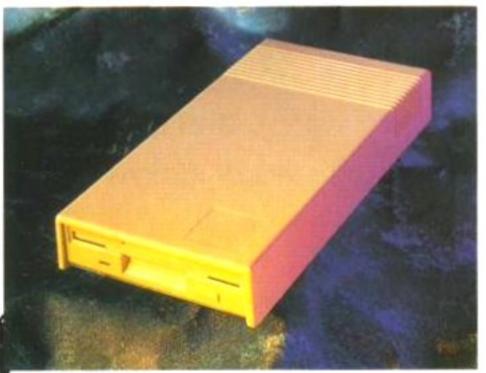
When we first reviewed it, we felt that the HD drive was too expensive. The makers agreed to cut the price from £130 to £99 and we responded with a 93 per cent rating. But to qualify for the special price, you need the coupon on page 123 of *AF48*. If you don't have it, you can get it now from our back issues department on page 146.

Power's High Density Disk Drive costs £99.95, with the coupon on page 123 of *AF48*, from Power on 0234 843388.

LONG-DISTANCE INFORMATION

A smart and easy-to-use way of connecting your Amiga to the phone lines and opening up the world of comms.

SUPRA 9600 MODEM 90% AF38

Government researchers, who study working patterns, believe that over the next 10 years up to a third of the people who work on computers in offices could do it at home. What makes this possible is the advance of communications technology: not just fax machines, but also modems, which mean your computer can talk down the phone line to other computers.

Modems are good for lots more stuff, too. If you've got one, you can plug into bulletin boards, download PD software and play 'on-line' games (one of the best is the *Air Warrior* flight sim, run by On-Line games, the best thing being that all the planes in the sky are flown by real people, like yourself).

The one trouble with the field of 'comms' (as it is known) is that it can be a little too technical, with a jargon all of its own. That's partly why we recommend the Supra 9600 modem as a good way to start. It's one of the fastest, transferring data rapidly and so saving on your phone bill. But it's also well-built and easy to set up and use.

The Supra 9600 modem costs £210 from UK distributor Power on 0234 843388

Arcade craziness!

Why is it that most of the best games have rainbow colour schemes and cute characters? Here's Marcus' favourite three games of all time, each one in an arcade style…

HIDDEN LEVELS
RAINBOW ISLANDS 95% AF10

For many a long month, *Rainbow Islands* was widely held to be the best Amiga game and held the record of the highest rating we'd awarded. Why? I'll explain. Bub and Bob, fat heroes of the still-classic *Bubble Bobble* (still available), starred in this and later went on to make the also excellent (and also still available) *Parasol Stars*. But best of the trilogy is still *Rainbow Islands*.

The idea is simple – jump up platforms killing things that want to kill you, keeping a step ahead of the time limit in the form of a rising tide of water and aiming to reach the top to go to the next level.

What makes it a winner is that there are so many ways in which you can play. As we played it more and more, we found numerous secret, hidden patterns which reveal ever greater bonuses. Indeed Andy Braybrook, of Graftgold, who converted it from the arcade machine, tells us that there's one set of circumstances that can set off an enormous bonus; but it's so unlikely that in millions of plays it might never happen.

Everyone should have a copy of this game. It's serious fun.

Rainbow Islands was first published by Ocean (061-832 6633) at £24.99 in April 1990 and has since been issued on numerous compilations, where you should still be able to find it.

STUPENDOUS SPEED
ZOOL 95% AF39

This arcade game is in many ways a triumph of plagiarism. It set out, quite openly, to install a black ant-like 'ninja from the Nth dimension' in exactly the same place on the Amiga as that occupied by a certain blue hedgehog on the Sega game system.

So take any idea you've ever seen in an arcade game, double the speed, and *Zool* is the result. Fortunately, it's not only fast. It's also great fun.

Hidden levels? Naturally. Colourful, surreal landscape? Of course. Carefully tuned game mechanics? Yep, plenty of thought gone in here.

Zool was also the cause of an argument that split the *AF* office down the middle. Did it deserve that high a rating? Should it perhaps, be higher? Some said 'lower', others yelled 'more!' until it nearly came to fisticuffs.

The problem was that no-one could come up with a rational argument to support their point of view, so we let Marcus have his say because he's the ugliest and most Northern. And I have to say, with retrospect, he was right. It deserved its score.

Zool was first released by Gremlin (0752 753423) and at the time cost £25.99. Yes, you can still get it.

DEEPLY BIZARRE
WIZKID 93% AF37

When Capn Bob fell off a boat, the resulting tidal wave was felt in Britain. One of Britain's biggest software houses, Mirrorsoft, disappeared overnight.

Despite being a top-quality arcade stormer, *Wizkid* was left without a publisher after the Mirrorsoft collapse. Snapped up by Ocean at a bargain price, it didn't fit into their marketing plans, so got no advertising. Then production problems meant it was delayed in going on sale until after its rave reviews in the press. Result: very few sales.

Sensible don't mind too much, because their excellent *Sensible Soccer* has sold in bucketloads.

Wizball was first published by Ocean in 1992 at £25.99. It's a little tricky to get hold of. But do try.

Rainbow Islands is so good, it remained our highest-ever-scoring game from April 1990 until September last year.

Attach this page to a jet at Heathrow and as it takes off and you'll get some idea of how quickly Zool moves.

Wizball is one of the mysteries of the gaming world: it's brilliant, but do you know anyone who's got a copy?

Amiga Format 50 Golden Greats
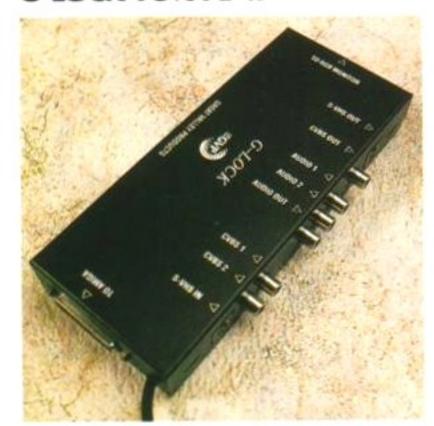
Making mo

You can use your Amiga to make your own videos: and there's also a strong connection between games and the stars of Hollywood...

Lock it or lose it

G-LOCK 93% AF47

Titling is a good place to start when creating your own videos: all you need is a copy of _Deluxe Paint_, a genlock and a video recorder. The genlock mixes the video pictures into areas of a single colour on the computer picture: so, for example, you could do your titles in yellow on a blue background then tell the genlock to replace the blue with the video picture played on your first video player, while your second video player records the combined image.

More ambitiously you could go for GVP's G-Lock. Genlocks are simple but video signals are complicated, and there's lots of different ones. The G-Lock has loads of connections, knobs and tweakers so it can adapt to do lots of different jobs.

G-Lock from GVP is sold at £350 by Silica on 081 309 1111.

The G-Lock certainly looks like a highly specialised piece of video equipment. That's because it is a highly specialised piece of video equipment.

Left on the cutting room floor

VIDEO DIRECTOR 91% AF32
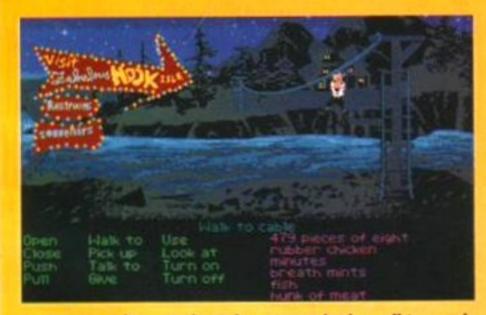
The last, and most difficult stage of the video production job is editing and providing a synchronised soundtrack.

In the TV studio, they have all sorts of wonderful equipment to help make their edits perfect, but in the home you're basically left to what's known as 'crash editing' – playing the original tape on one machine and recording the bits you want on another, with the quality of your cuts entirely dependent on how good your 'Pause' button is.

Gold Disk had a brilliant idea. What if you used your Amiga to control the two video recorders, stopping and starting them to maximise the quality of cuts? You could plan out the whole production on screen, synching the sound in at the same time.

The aim: games like movies

THE SECRET OF MONKEY ISLAND 92% AF23

Horn-swoggling, timber-shivering, plank-walking and X-marks-the-spotting are all to the fore in _Monkey Island_, probably the funniest computer game ever.

Lucasfilm Games created the classic _Monkey Island_ and are probably still the only game-makers related to a film-making company even though the era of movie-like games filmed using movie-like techniques is almost upon us.

Schwarzenegger is said to have filmed extra sequences during the making of _The Last Action Hero_, for inclusion in the computer game of the film. It will come on CD, with millions of bytes of video footage and live actors in the roles.

The Secret of Monkey Island _was written by Lucasfilm Games and originally published in the UK in May 1991 by US Gold at £24.99._

Through the keyhole

ROCKEY 90% AF42

Ooh, this it's clever! This is probably the cleverest piece of video gadgetry available for the Amiga. What it essentially does is let you become Michael Fish. Might not sound too great, but that basically sums up a technique that has all sorts of othger uses too. What the RocKey enables you to do is what's known in TV and film-making circles as 'chroma-keying', but it's probably best known to you and me as superimposing.
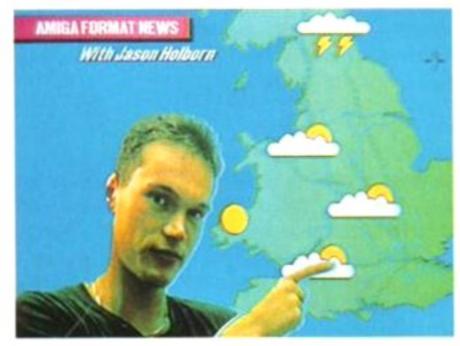
Basically it's the opposite of genlocking. A genlock means you can put video pictures into the single-colour background of a computer image. A chroma key means you can put computer graphics into the more-or-less single-colour background of a video image.

So film yourself against a blue background waving your arms about, dressed in a dodgy sports jacket and slacks, then chroma-key in a weather map drawn up in _Deluxe Paint_ and – hey presto! Instant Michael Fish!

RocKey from RocTec costs £350 and is available from HB Marketing 0753 686000.

Using the chroma-key technique to put Amiga graphics behind a video signal, you can transport yourself into the magical fantasy world of your Amiga!

What, a decent sequel?

MONKEY ISLAND 2: LECHUCK'S REVENGE 95% AF36

Hollywood loves sequels because they're guaranteed money-earners, but as Barry Norman will tell you, all too often they're rubbish. If only a few more of them could take a leaf out of Lucasfilm's book, we'd be OK.
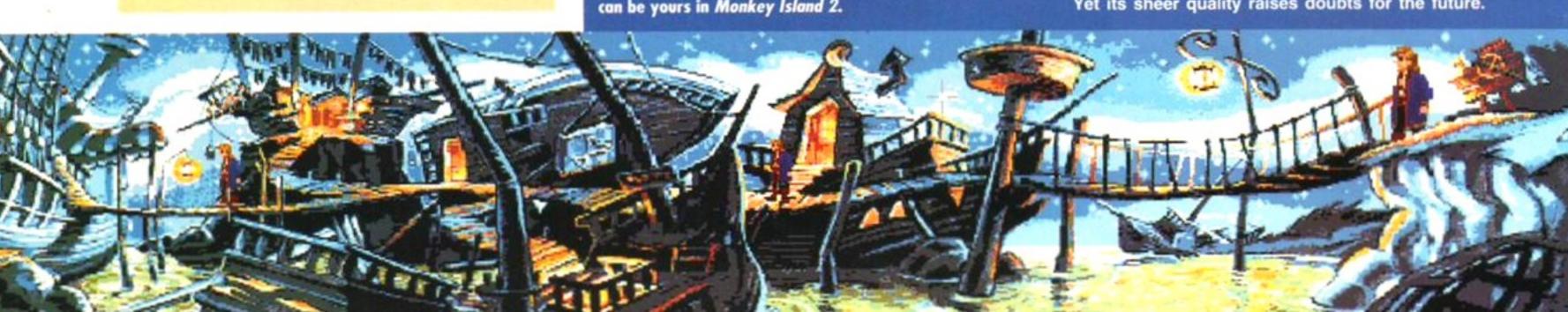
At one stage last year, dreadful rumours were circulating that Lucasfilm Games might close, which would have been an awful loss. Fortunately, they'd simply been restructured and changed name to LucasArts, no doubt in anticipation of the increasingly close connections between the previously separate world of films and games.

Monkey Island 2 isn't as good as the original: it's better. What it retains is the easy-to-use point-and-click interface; what it builds on is the graphic beauty, the cleverness of the puzzle-solving and, above all, the humour of the original game.

Yet its sheer quality raises doubts for the future.

Even greater swashbuckling deeds, even more bizarre puzzles involving fish and even more stupid pirate jokes can be yours in _Monkey Island 2_.

vies...
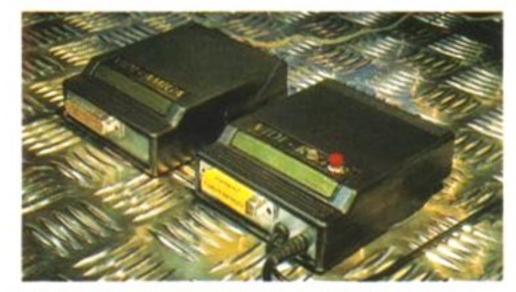
It was a great idea — using your Amiga to control two video recorders during editing — but Video Director was too botched to threaten established editing systems.

It was a great idea, good enought to earn a Gold but sadly Video Director system never seems to have caught on. Perhaps we'll see it resurrected some time in the future?

Video Director was created by Gold Disk and first appeared in March 1992 at £149.95.

Smashin' grab
VIDI COMPLETE COLOUR SOLUTION 92% AF40

OK, it looks like a bunch of wires and techie stuff; but believe me, you can have more fun with the Vidi frame grabber than Joanna Lumley can have with a yogurt.

If you've got the use of a video camera, one of the most fun and, indeed, useful things to get your hands on is a frame-grabber, also known as a video digitiser.

We've been having fun with Vidi-Amiga ever since it first appeared in a black-and-white only version back in 1989. Many a happy hour was wasted as we grabbed short animations of each other pulling silly faces (in mono, Vidi can grab 16 or 32 frames in one go, several seconds' worth when animated). Eventually we roped in anyone who wandered past and got them to pose for grabs which were used to brighten up our Letters pages.

Vidi-Amiga has since been updated to work in full colour (though it takes several seconds to grab each colour image, so you can't do 'live action') and in this complete package comes with an RGB splitter, making colour grabs much easier.

You can also grab from a paused video, for which you don't need a camera, or digitise pictures from magazines and use them as the raw material for collages in *DPaint*. Vidi has also been used to make many a PD slideshow disk. All good (and mostly clean) fun.

Vidi, The Complete Colour Solution is made by Rombo and can be bought at £179 the lot, direct from them on 0506 414631.

Making music...

How to get on *Top of the Pops*, Part One. Take an Amiga, let it teach you to play keyboards then use it to record your hit single. Simple, eh?

MIRACULOUS CONTRAPTION
MIRACLE PIANO TUTOR 93% AF32

It's astonishingly easy to create 'acid house' type music on your Amiga. Just get a sound sampler for about £35, a PD sample sequencer for about £3 and grab a few noises. Lay down a heavy drum beat, add tinny percussion, then bung a vaguely melodic noise on top. Job done!
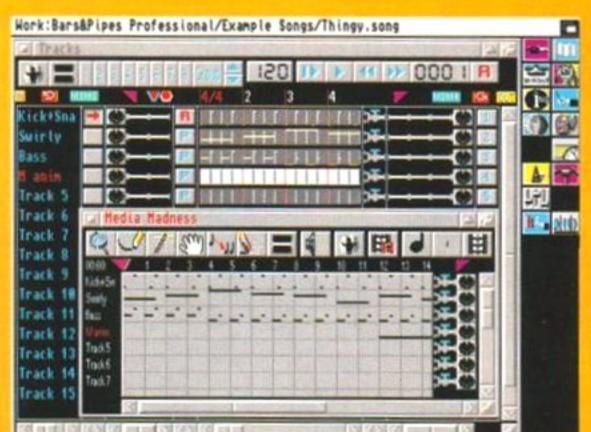
Seriously, it really is more or less that easy. What making basic music won't do, however, is teach you to play an instrument. That's where the *Miracle* comes in.

See this keyboard? You can learn to play it! Yes, you can! It's how Nigel Kennedy started off! All you need is an Amiga and the *Miracle* system...

The *Miracle* is a proper synthesiser keyboard that hooks up to your Amiga and a set of programs that teach you how to play. The Amiga-to-keyboard connection is two-way, so the *Miracle* software can play tunes on the keyboard and also listen to how well you do when it's your turn. That way, it can monitor your progress, adjust its lessons to your pace of progress and tell you when it's time to move on to the next bit.

It's clever, it's tremendously effective and it's very good fun. Considering you get the keyboard as well, it also works out a lot cheaper than piano lessons.

The Miracle Piano Tutor *was created by Software Toolworks and is distributed in the UK by Mindscape, who charge £299 for it and are on 0444 246333.*

WATER MUSIC
BARS AND PIPES PROFESSIONAL 2 90% AF46

Bars and Pipes uses the simple analogy of water-pipes in its graphical, colourful and very user-friendly interface. It treats every instrument as a separate pipe, and you can follow easily the flow from start to finish. It's a clever piece of work.

Bars and Pipes Professional 2 *is sold in the UK at £299.99 by Meridian who can be reached on 081-543 3500.*

Bars and Pipes, the only professional-quality music program that looks fun to use. Hell, even in the most techie of studios you want your music to be fun!

There's never been a good game based on a film...
BATMAN 90% AF5
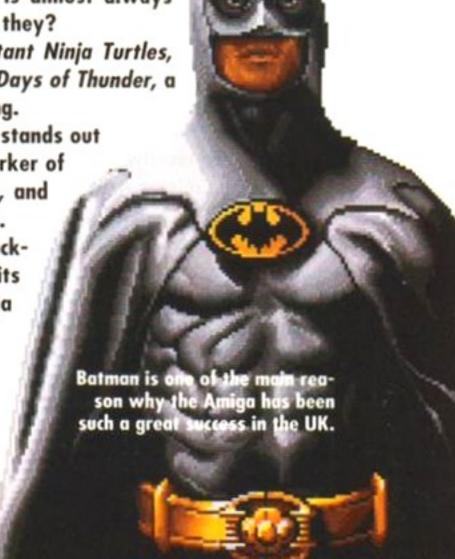
...Or has there? It's an axiom of game reviewers that a good film is almost always turned into a lousy game. After all, they take the money and run, don't they?

Classic examples of appalling movie licences are the infamous *Mutant Ninja Turtles*, who appeared in a Mirrorsoft game which we rated at 33 per cent, or *Days of Thunder*, a game based on NASCAR motor racing — it was more like milk float racing.

You have to go back to Christmas 1989 for a film licence that really stands out in the memory. At the height of the *Batman* craze, Ocean produced a corker of a game: accurately based on the film, capturing the same atmosphere, and at the same time a top-notch game based on five varied levels of action.

The first really corking A500 bundle was the *Batman* pack, which packaged the three-year-old A500 as a gameplayer's dream. It sold in its thousands, and so paved the way for the enormous success of the Amiga in Britain. Hurrah!

Batman was originally published by Ocean at £24.99 in December 1989 and is now pretty difficult to get hold of, more's the pity.

Batman is one of the main reason why the Amiga has been such a great success in the UK.

Creating wo
shaping wo

50 Golden Greats

Staying sharp

PHILIPS CM8833/ II MONITOR 92% AF38

Nothing improves your quality of life quite as much when you're using an Amiga as buying yourself a decent monitor. Because it is specially designed to create a much sharper picture than a television, and because it uses the RGB signals that your Amiga sends out without any kind of translating or fuss, a monitor gives a far crisper, clearer picture. And when it came to buying a monitor for your Amiga 500, 500 Plus or 600, there was only one choice: the Philips CM8833 MkII.

With a superb picture, rugged construction and excellent stereo sound, the Philips had everything that a monitor needed. It even came with a free Amiga game, *Lotus 2*!

Sadly, though, this could be the last time we'll be recommending the king of all Amiga monitors. The AGA chip set has some classy new graphics modes, and to make the most of them you need a multisync or S-VGA monitor (five of the new AGA multisyncs and dual syncs are reviewed on pages 128-129). So, with the A1200 and A4000 taking over, let's just hope that Philips can come up with a new model to make us just as happy.
The Philips CM8833/II is widely available from Amiga suppliers at around £220.

Some of the most amazing Amiga software is the graphics stuff that lets you create weird worlds of your own devising, or messing about with the world as we know it to invent something completely new…

Making mountains

VISTA PROFESSIONAL 3 92% AF46
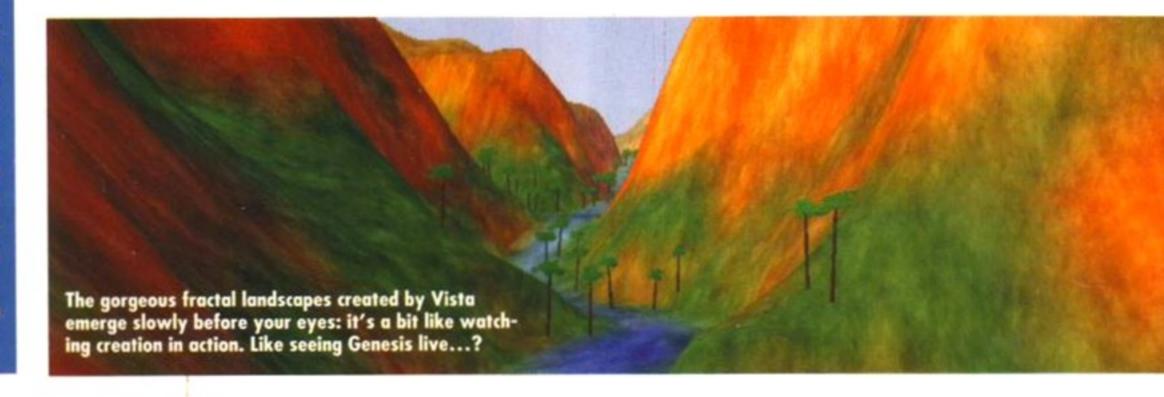
Science fiction author Arthur C Clarke has an Amiga, mainly so that he can use this program. His new book, which is due out later this year, will contain images of the planet Mars produced by it. He, too, makes worlds of his own.

The astonishing *Vista*, for a long time a favourite of ours, has got better and better over the years. It's a fractal landscape modeller, which means it uses the mathematics of chaos theory to generate shapes that are jagged like real landscape.

The first fractal modellers used a 'seed' number as a start point, which meant you could type in your birth-day and see how it looked as a landscape, like a geographical horoscope. It's wonderful watching an Amiga slowly drawing a fractal scene, as a new landscape emerges.

The great *Vista* innovation, though, was to use geographical map data as a skeleton and flesh it out with the fractal surfaces. Using the DEM map files they provide, you can then build virtual models of, say, the Grand Canyon, viewed from any angle or even, if you're in the mood, flooded by a massive river. It's enormous fun: buy it immediately!
Vista Pro 3 by Virtual Reality Labs is available in the UK for £69.95 from Meridian on 081-543 3500.

The gorgeous fractal landscapes created by Vista emerge slowly before your eyes: it's a bit like watching creation in action. Like seeing Genesis live…?

Get the right image

IMAGEFX 92% AF45

With the rise of 24-bit 'true colour' graphics, image processing is becoming more and more important. It has two aspects: one is functional, the other creative.

This recent release shows how far GVP have come from their origins as hardware manufacturers. It also shows what a difference a really good, creatively biased image processor can make to the Amiga scene.

With true colour, we can

ImageFX is the first true colour program which can be used to blend photographic-quality images. The results, if it's used artistically, can be quite bizarre.

now handle images of photographic quality, and what we really want to be able to do is mix different images together at photographic quality too. This method is called 'compositing' and we use it frequently in this magazine, but not until the arrival of *ImageFX* could you do it properly on the Amiga, and so it marks another milestone in the Amiga's history.
ImageFX from GVP is distributed at £149.95 by Silica on 081-309 1111.

Staying in control

DIRECTORY OPUS 4 98% AF45

This program received the highest ever rating in *Amiga Format*! *Directory Opus* is aimed at an enormous niche in the market: a hole left by Commodore themselves, who have some how managed to make the Workbench interface (with which you are supposed to control your Amiga) much more difficult to use than it ought to be.

Using *Directory Opus* makes it easy. Very easy. If you can use a mouse, you have access to every capability of Workbench, plus some more besides. You can, for example, click on a file and *Opus* will do whatever's appropriate according to what type of file: if it's a picture, show you it; if it's text, display it, if it's a sound sample, play it.
Opus has achieved its high score because it's a

rlds, rlds...

Ch-ch-ch-ch-changes

MORPH PLUS 90% AF42

This is the computer graphics technique of 1992 and 1993. It's everywhere! Remember the Channel 4 posters where John Major turned into John Smith? Or the Volvo ad where the car changed into a horse? Or any ads currently showing, where one car changes into another? It's all morphing.

Morph Plus makes it easy to change anything into anything else using the trendy computer graphics technique of the Nineties, as seen in Terminator 2!

It's used so much because it looks really good, and it's very easy to do, and therefore very cheap. And you can do it at home, kids, using the amazing *Morph Plus!*

All you have to do is take two pictures, for your start and end points. It doesn't matter if there's no relation in shape or colour between your two objects: they could be a banana and an orange, say. Next you mark out the area of the start image that you want to be morphed (trace the banana) and the area of the last picture which you want it to change into (trace the orange).

Decide how long – how many frames of animation – you want it to take, press 'go' and sit back while the computer does all the hard work, shifting the shapes and blending the colours. Then, finally, note how damn easy it all is and snigger when you consider somebody charged the mugs thousands for that car advert. *Morph Plus is by ASDG and is available for £179.99 from MicroPace: 0753 551888.*

Directory Opus does its thing so well that it received the highest review score we've ever awarded.

simple concept but it's excellently executed. Everything you'd expect it to do, it does perfectly, and it also does a lot more besides. And it does it in a simple, accessible, user-friendly way. A great example of program design. *Directory Opus is designed by INOVAtronics and available for £79.95 from Silica on 081 309 1111.*

GAMES OF TWO HALVES

There have been so many football games it's untrue, mainly because us poor saps keep on buying them. Special events like World Cups seem to trigger off the 'buy a footie game' instinct, though which foolish marketing man imagined we would buy a game called *Graham Taylor's European Championship*, I don't know.

Marketing teams try everything they know, signing up our favourite players (Gazza, Lineker, Barnes et al) to have their names splashed on yet another tedious product, or attempting to appeal to the die-hard f,ans with games named after their top teams.

Strangely enough, the results in the first Premier League season reflected the quality of the games named after them. Manchester United showed the only real quality, Liverpool were very average and Leeds United were totally awful.

Apart from the mythical *George Best's Drinking Soccer* – described by *AF* freelance writer Phil South as 'a game of two halves and fourteen quick whiskies,' – the thing to remember is that there is only one football game. It used to be called *Kick Off 2*, but now it seems it's changed its name to *Sensible Soccer...*

Sensible Soccer is now widely acclaimed by the critics as the top footie game, though I don't think anyone asked Saint and Greavsie...

CHAMPIONS...

KICK OFF 91% AF1

Kick Off was the Liverpool of footie games: it reigned supreme for seasons. It, alone, matched the excitement of the real thing, blending a great control system with immense speed and a marvellous element of unpredictability that made it seem inspired by some force far beyond the logic of computers. Even its bugs are now legends.

Then along came an add-on that made it the complete footie fan's dream: a management game, in which you could train your *Kick Off* teams, buy and sell players, even teach new tactics (just try that, Graham Taylor!) *Kick Off* and *Player Manager* is still a team that takes some beating. *Kick Off* was published in August 1989 at £19.95 by Anco – 0322 292518.

AND CHALLENGERS

SENSIBLE SOCCER 91% AF36

They're quite honest about it: the Sensible Software team loved *Kick Off 2* so much that they decided to rip it off completely. Somewhere along the way, they seemed to add some improvements and the sum total is a game that is now regarded

as the best in the field. The control is less erratic, the players' names are the real international team squads – it's that kind of detail we're talking about. The result, though, is that *Sensible Soccer* is now top of the league.

Sensible Soccer was first published by Renegade (071-481 9214) in June 1992 at £25.99, and it has sold 125,000 copies to date and is still available: there is soon to be a version on CD.

FOUL, REF! HE SHOT OUR GOALIE!

SPEEDBALL 2 94% AF20

If Vinnie Jones's hard men of soccer were all dressed in armour and sent out to play on a cast-iron ice hockey pitch, the result would be something very much like *Speedball 2*. Actually, I admit, this game is not really anything like soccer, but it is mentioned at this point because it plays very much like *Kick Off* – fast, frantic and with lovely unlogical and unpredictable elements. It's one very fine game.

This was the first release from the legendary Bitmap Brothers before they established Renegade, one of software publishing's first independent label. Renegade are committed to giving credit to the people who deserve it: and they ought to be committed to a mental institution, so it's no surprise that they signed up the Sensible boyz and published the above-named top-ranking footy game. Que sera sera... *Speedball 2* was first published in May 1991 at £24.99, and is now available in a Bitmap Bros compilation. Renegade – 071 481 9214.

No more shiny balls!
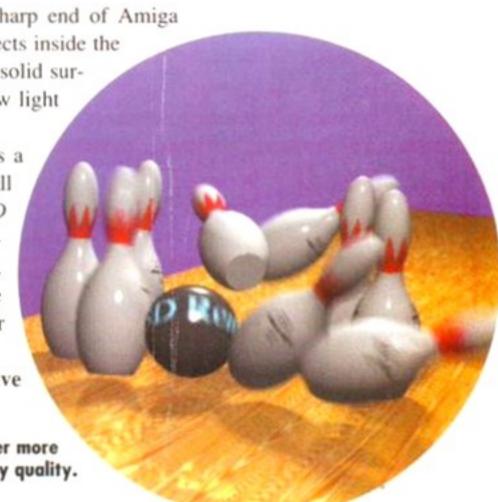
REAL 3D 95% AF31

Ray-tracing and 3D modelling were long considered the sharp end of Amiga graphics. The technique involves building 3D models of objects inside the computer and then not just fleshing them out with coloured, solid surfaces, but also using complex maths to calculate exactly how light will bounce off the objects, creating shadows and reflections.

For a long time, the hallmark of a ray-traced image was a plastic, surreal quality. The absolute cliché was a shiny ball bouncing on a chequered floor. The outstanding *Real 3D* marked a change: finally, ray-tracing programs were beginning to produce images that looked sumptuously realistic. And yet, sadly, it may have been too late. Nowadays, image processing programs are taking over, because they can deliver the genuine real world rather than an imitation real world. *Real 3D 2 from Activa is distributed at £400 by Alternative Image who are on 0533 440041.*

Modern ray-traced images like those from Real 3D 2 became ever more realistic and yet have never lost that surreal, other-worldly quality.

Painting wit

Art and graphics are the two areas that many of us find most impressive on the Amiga. Recently we've seen massive advances right across the graphics scene, so let's get to the art of the matter...

Fun is the word for both kids and adults with EA's excellent children's painting program.

Child's play

KID PIX 90% AF46

There's nothing that works better to get kids interested in computers than some decent painting or drawing software. The problem was that there never used to be a dedicated children's paint package for the Amiga, until Electronic Arts released *Kid Pix* that is.

Previously there were only adult paint programs like *Deluxe Paint*, or painting sections within other educational software, like *Fun School* . What made *Kid Pix* stand out from the crowd was that although kids (and adults) could paint some great pictures, there was another dimension to the program: *Kid Pix* could make some fabulous noises, like erasers which when applied exploded out of the speakers. The only problem was that it wasn't written specifically for the Amiga, so it didn't make the most of its capabilities. Hopefully *Kid Pix II* will be though!
Kid Pix is by Electronic Arts 0753 549442.

New medium for old masters

TV PAINT 2 92% AF47

As the technology advances, so computer painting gets more like the real thing. 24-bit 'true colour' means you can use 16 million different shades of colour, that's as many as the eye can distinguish. The best paint packages, like this one, offer drawing tools that imitate real media such as watercolour, pastel, or ink.

Unfortunately, *TV Paint 2* will only run on an Amiga with the Amiga Centre Scotland's Harlequin graphics card. When a 24-bit program is developed that uses the standard HAM-8 mode of the A1200 and A4000 for its display, then we'll really be into the new era for artists.

TV Paint 2 is by TecSoft and is available for £600 from Amiga Centre Scotland on 0896 87583.
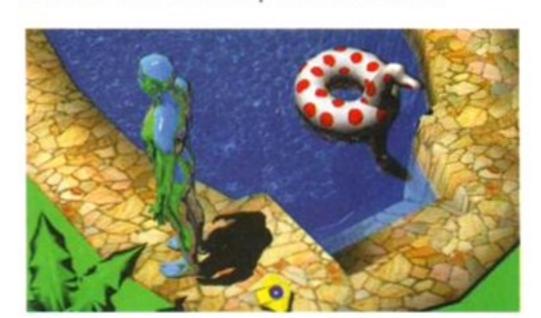
Brush up on OpalVision

OPALVISION 96% AF41

True colour graphics is the standard that serious Amiga creative types have to aim for. It offers photographic quality for, say, full-colour scans in DTP, and gives you the range of tones you need for realistic imitations of real-world media such as watercolour or pastels.

The snag is that although AGA-equipped Amigas have a 24-bit palette they only have an 8-bit display, limiting you to 256 colours. Worse still, the graphics cards that give your Amiga a 24-bit display all run a different standard and save different kinds of files.

You could wait for a standard to emerge. But if you want to get on with true colour, there's one system that stands out as the obvious choice. Our third highest-rated package of all time, *OpalVision*, combines a 24-bit display board with an excellent paint package at a bargain price. Better still, add-ons are on the way including a frame-grabber, a genlock and, best of all, a real-time video effects chip called the Roaster.

Art for everyone

Deluxe Paint 4 AGA is the latest incarnation of Electronic Arts' outstanding paint package.

DELUXE PAINT 4 AGA 90% AF44

Stay ahead of the game, stay on top. That's what Electronic Arts have done all the way with *Deluxe Paint*, and it's worked. The program has undergone five major revisions since its first appearance at the launch of the Amiga in 1985 – indeed, it was EA who created the IFF picture file format.

Shrewd marketing – for four years now, the latest-but-one version of *Deluxe Paint* has been bundled with all new Amigas – has made sure the program is familiar to and loved by all Amiga owners. It's the standard. For years, *DPaint* animated and painted in a maximum of 64 colours then, finally, a 4,096-colour HAM version arrived and now the story is complete with this A1200 incarnation that supports the 256-colour and HAM8 screen modes. Apart from the colours, though, little has changed from *DPaint III*. After all, it didn't need to. The only surprise is that we didn't give this a higher rating. Excellent though it is, there is still room for improvement and I'm sure that will come as EA's programmers work away at the AGA chip set. We wouldn't be surprised to see *Deluxe Paint V* before too long. *Deluxe Paint 4 AGA* is published by Electronic Arts at £99.99 and is widely available..

OpalVision was created in Australia by Opal Technologies and comes to the UK via Centaur of America. It's available from Indi on 0543 419999 for £599.99.

h light

Power to the people

DCTV 90% AF31

DCTV was made by Digital Creations and is sold in the UK at £379 by Silica on 081-309 1111. A good price for a great piece of kit.

Got an A500 or a limited bank account? Sick of all these graphics show-offs swanning around with their new, more colourful chip sets and their overpriced true colour cards? Never mind. You too can have lots and lots of colours – more than enough to pretend to be true colour and give photo-realistic images on your screen.

DCTV is a stunningly clever piece of kit. I won't even try to explain how it works, but basically it's a box that plugs in-between your Amiga and your monitor and fools the Amiga into thinking you can use about 200,000 colours. It even fools Amiga programs such as *Deluxe Paint* into thinking they can display pictures with these extra colours.

It comes with a decent paint package, a superb image processing program and even a built-in video digitiser. All in all, quite a package. So convincing was it, that Commodore arranged to buy the technology and sell it as a miniature plug in for CDTV, giving the CD-based system the ability to display photo-quality pictures. The add-on never actually arrived, but at least it meant we could print headlines such as 'CBM OK CDTV DCTV'.

Even better than the real thing?

Of the many games based on real-life sports, very few capture the spirit of the real thing. After all, sports are a physical challenge. Yet, strangely, some sports games turn out to be ideal computer fun...

PINBALL WIZARDRY
PINBALL FANTASIES 90% AF41

Here's an example of where the computer version captures almost exactly the thrills and spills of the real thing. This is another game in the tradition of *Kick Off*, *Speedball 2*) that cost us many an hour of lost productivity in the *AF* office. Some clown would boot it up on an Amiga in the morning and then, throughout the day, every time one of us wandered past we'd see it on the screen and feel compelled to have a quick go.

Realistic ball movement, interesting tables and that combination of skill and luck needed to achieve a high score all made this game a winner. In the end, we had to ban it in the office and pop down to the pub for a fix of the real thing at six every evening!

Pinball Fantasies was first published at £29.99 by 21st Century Entertainment in November 1992.

Pinball Fantasies offers almost the same challenge for skill and lightning reflexes as the real thing. We were at the forefront of the pinball renaissance in 1993.

SHINE YOUR SHOES FOR THE CRUCIBLE
JIMMY WHITE'S SNOOKER 91% AF26

Apart from balls that pull faces at you when you're not looking, *Jimmy White's Snooker* is a model of green baize realism.

There's one lovely touch in this one which I'd like to see introduced in real snooker. If you leave the Amiga alone for a while, it starts getting bored. First a few flies whizz around and settle on the screen, then the balls open eyes and start pulling faces at you. If only that happened in the real world, it would make watching the slower players such as Cliff Thorburn and Terry Griffiths a lot more interesting. I don't know what Len Ganley would make of it all though.

Anyway, this frivolity apart, Archer Maclean has gone to great lengths to produce a game full of immense realism and one that also captures the full flavour and atmosphere of the sport. You almost expect a low voice to drone 'And he's calling for the long spider' as you plan a fiendishly difficult deep screw out of baulk, kissing the yellow on to the cushion to bring the cue ball back up the table for the black and the chance of a maximum 147 break. Snooker is, after all, about having a good eye for an angle and choosing the right strength to play your shot, and it's these two requirements that have defined the control system for *Jimmy White's Snooker*. Add in the carefully-tweaked, realistic ball movements in the 3D environment and you're on to a sure-fire winner.

Jimmy White's Snooker was first published in September 1991 at £29.99 by Virgin Games.

Do it yourself!

EASY AMOS 92% AF34

Contrary to popular belief, it's not terribly difficult to learn how to write your own programs and it's also quite fun.

When home computers first took off, in the early Eighties, programming was one of the most popular hobbies. Magazines used to print enormous listings for enthusiasts to type in and people said things like 'I chose the BBC for its excellent built-in BASIC'.

Thank God those days are gone. Now Commodore don't even bother with the AmigaBASIC language that used to come with all Amigas. Yet the programming language *AMOS* managed to rescue programming from the mires of tedium, thanks mainly to its concentration on programming Amiga games. Responding to feedback that said *AMOS* was still a bit daunting, Europress came up with *Easy AMOS*: more

Although in *Easy AMOS* the guidebook that taught you how to program was given more importance than the program itself, even experienced *AMOS* users preferred many of its features.

friendly, much improved and with an excellent tutorial guidebook ('Not a manual,' they kept telling us) to ease you in. And it works.
Easy AMOS costs £34.99 and is available from Europress Software on 0625 859444.

IT'S JUST NOT CRICKET
SPORTS MASTERS 90% AF44

Indy 500 is a fantastic racing game, but we're here to talk about the wonderful *PGA Tour Golf*.

If a good compilation is one in which you get two classic *AF* Gold games and two err, other ones, then this is a good compilation. Sadly we don't have space here to mention the superb *Indy 500* racing game that comes in this pack, because we're here to talk about golf. EA's *PGA Tour Golf*, is still my favourite golf game. The gameplay bears no relation to reality (golf is about physical elements such as grip and weight of club) so Amiga golf has evolved a computer genre based on intelligence (club selection and aim) and timing. This game shares one attribute with its real-life equivalent: it's competitive and relaxing.

Sportsmasters was published at £29.99 by Empire in March 1993.

Amiga Format 50 Golden Greats

Playing to win...

...when you are, you need the right combination: a classic game, a decent joystick, and something to help you cheat!

THE BUG 92% AF29

Creature comfort

Available in black, green and soon with chrome eyes for £14.99. (Cheetah 061-707 7080.)

The big problem with joysticks was that they came in two types: stiff ones and loose, wobbly ones. But then came The Bug. 'That's ugly,' we thought. But before long, everyone was pinching it off whoever had it because they wanted it for their favourite game. 'We'd better review this properly,' we decided. And there it was... the first and only joystick ever to get a Gold award.

The Bug is comfortable to hold and The short, free-moving stick bit clicks positively when moved and the buttons on the front have a distinct click too. The positioning of both means that large-handed people can hold it in the palm, wiggle with the thumb and generally play monodextrously leaving a hand free for... errrm... scratching themselves. Or something.

Do a lot of work for charidee, mate

SLEEPWALKER 91% AF44

Sleepwalker, starring Ralph the Dog, who attempts to save his unconscious master from disaster. Not only the first Red Nose game, but also a playable little charmer.

Here's a Gold with a unique place in history: the first Comic Relief computer game. Ocean teamed up with Lenny Henry to create a game where having fun also meant aid for starving Africans and charity projects throughout the UK. *Amiga Format* did its bit by contributing free advertising space for the game. There was also a special edition of the magazine which was free with the special A1200 packs.
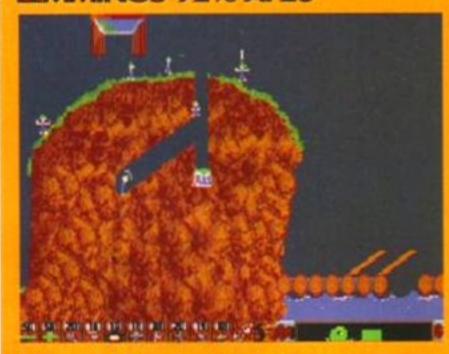
Even though a percentage of the sales of each game went to charity, we still got a great computer game, packed with humour, and at the same time knew that we were helping Comic Relief succeed. And remember: if you didn't buy a copy at the time, it's not too late. *Sleepwalker* was published on Red Nose Day 1993 at £25.99 and you can still get your mitts on it. Ocean: 061-832 6633.

THE GREATEST AMIGA GAME EVER!

LEMMINGS 92% AF20

Who cares if *Lemmings* isn't the best Amiga game ever? It's certainly got the most loveable characters!

Why is Lemmings the top Amiga game of all time? After all we've awarded higher scores to other games. Well it's not just to do with the quality of a game: it's to do with memorability, the sense of having an important place in history.

Think Sega and you think of Sonic, and Mario equals Nintendo. It's been argued there was no equivalent on the Amiga, and at one stage it appeared that *Zool* was going to take that accolade. But the thing is that if you think *Lemmings*, you think Amiga.

Dave Jones, creator of *Lemmings*, wrote his first hit on a 1Mb Amiga with just a second disk drive attached. Before *Lemmings* came *Menace* and *Blood Money*, both Amiga games. And whatever else it's been seen on, *Lemmings* came out first on the Amiga. This game is a great Amiga tradition, and long may it stay that way! *Lemmings* is now on budget. Psygnosis (0223 844894).

If you can't win – cheat!

ACTION REPLAY III 90% AF38

Plug this hardware in your A500 and you can break in to any program while it's running. A slow-motion knob helps you to put the brakes on a game that's going too fast for you, while cheat facilities enable you to give yourself infinite lives or downgrade the opposition.

The cartridge can also be used to pirate games, which has led to pressure for *AF* to banish it from the pages. The argument is a valid one, but it has many other legitimate uses so we've resisted that pressure, even though we are dead set against piracy.

Slightly hypocritically though, our favourite use for the cartridge is to save out graphics and sound effects from games. This is perfectly legal so long as you own the game. **Action Replay III** costs £59.99 from Datel on 0782 744707.

The Action Replay cartridge can slow games down or break into them, and thus enabling you to tip the odds in your favour.

GOLD 50: A TOTAL AND UTTER CHEAT!

If you've been counting, you'll notice we've mentioned 49 Golds. So what's the 50th? Well, it's not a Gold at all, really. We're giving the remaining place to all the excellent PD programs out there.

All of the following should be available from good PD houses everywhere...

1   State of the Art/Jesus on E's
The best two music/animation demos. Brilliant graphics expertly synced to rave-style sound-tracks.

2   At the Beach by Eric Schwartz
The king of Amiga animation, Eric's anims are all brilliant. *At the Beach* is possibly his finest hour.

3   Rend24
An excellent file conversion and image processing utility. Works happily with 24-bit and AGA pictures.

4   Revelations
A slideshow filled with some of the best hand-drawn piccies we've ever seen. Lots of fantasy girls drawn by Rank in either 16 or 64 colours.

5   Defenda
Superb *Defender* clone, written using the excellent *Blitz Basic 2* (see pages 118-119).

6   Liamatron
First Shareware game from Jeff Minter. A superb version of the coin-op *Robotron*, only using llamas instead of robots. Inspired.

7   VMorph
Morphing on the cheap. Black-and-white lo-res only, but it can still produce good results.

8   Landing by Tobias Richter
Ray-traced animation of a spacecraft approaching and landing on a planet. Richter is very talented.

9   Road Hog
One of the first animations by Hugh Grove, this one is short, cute and very appealing.

10   Powerbase 2.1
Great database, with video-style controls. Lots of features normally only on commercial products.

Coming soon...

The second
Future
Entertainment
Show

November 11 - 14
London, Olympia

It'll be completely great!

Featuring
GAMESMASTER

The second Future Entertainment Show

Amiga Format and F
Get creativ

The Amiga is a versatile machine. And so are its users. That's why we've put together this almighty mixed bag of a competition; to give everyone out there the chance to get creative and win the perfect prize. So whatever you're in to, get your entries in now!

Over the years the Amiga has grown into an extremely sophisticated machine. Not just just as a games machine, or solely for serious use, but the Amiga is now a capable performer in many areas. At creating gorgeous graphics, the Amiga is master, with programs like *Deluxe Paint*, *Imagine* and *VistaPro*. And Desktop publishing is a doddle with *PageStream* and *ProPage*. With its ability to play sampled sounds and run a wide variety of music programs, the Amiga is also a powerful music machine. And Editing and titling videos is another skill the Amiga is adept at.

Because of these plentiful and wondrous abilities, we've put together a mega huge competition with prizes that represent the variety of operations the Amiga is used for. And the different things you

have to do to win the prizes means that everyone has a good chance of winning a prize they can really make the most of!

Each of the prize winners will have their prizes presented to them at the Future Entertainment Show on 11-14 November. (But don't worry if you win and you're not there, you prize will be sent to you. But you would be mad to miss it.)

This year the FES promises to be even bigger and better, with 150 exhibitors covering around 20,000 square feet of the Olympia Exhibition Centre. The price of tickets has not been set yet, but with more than 60,000 people expected to attend, they're bound to sell out quickly. A credit card hotline has been set up for the show, so to book your tickets call 051-356 5085.

WIN A VIDEOPILOT

330

WORTH £1,300!

IF YOU WIN this competition you can turn your Amiga into a multi-media machine with this excellent video editing suite from V3I. Plugging into your Amiga's serial port, and controlling up to three source decks and one single destination deck at a time, the Videopilot enables you to cut and edit your videos to achieve more professional results.

Because we know that anyone interested in winning a Videopilot

...be a dab hand with their camcorders (or are working on it), to win this competition you have to make a video recording.

Now we're not fussy – the subject matter is completely up to you – it can be humorous, thrilling, horror, a music video or a recording of everyday life. What we do want is originality and style. But what we don't want is your original and only copy of your recording – if it gets lost or damaged in the post you will have lost it for good.

Send your entries, and your name and address and phone number on a postcard or the back of a sealed envelope to: Creative Film Compo, *Amiga Format*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. To arrive no later than 8 October 1993.

uture Entertainment Show
e competition

3 Panasonic PRINTERS

With each of the Panasonic printers from Indi Direct, you also win a copy of word processor, Wordworth.

WHATEVER YOU'RE USING your Amiga for, whether it is simply word processing and writing letters, or complex graphics and illustrations, you will need some type of output device. That's why we've got together with leading mail order company, Indi Direct Mail, to offer you the chance to win one of three high quality printers from **Panasonic**. With each of the three **Panasonic** printers we're also giving away a copy of Digita's excellent word processor *Wordworth*, worth £129.99.

Indi are offering a **Panasonic** KXP-4410 laser printer as first prize. Worth £499.99, it can handle complex graphic applications, has low running costs, and prints up to five pages a minute. Second prize is a **Panasonic** KXP-2123 24-pin Quiet colour printer worth £239.99, and third prize is a **Panasonic** KX-P2180 9-pin colour Quiet printer worth £189.99. Both high performers, they use Quiet printing technology and have fast printing speeds.

AND WORDWORTH

ANSWER THESE QUESTIONS:

1) How many fonts are there on a **Panasonic** KX-P4410 laser printer?
2) How old are you?
3) What are the print speeds of the **Panasonic** KX-P2123 Quiet colour printer?
4) What computer/s do you own?
5) What is the sound level of the **Panasonic** KX-P2180 Quiet colour printer?
6) What will your next computer-related purchase be?
   (A clue: the answers to questions 1,3 and 5 are on the Indi advertisement.)

TIE BREAKER:
I think Indi is the number one choice for computer products because ....
....*(in no more than 15 words)*
Send your answers, and your name and address and phone number on a postcard or the back of a sealed envelope to:
Indi Printers Compo, Amiga Format, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. To arrive no later than 8 October 1993.
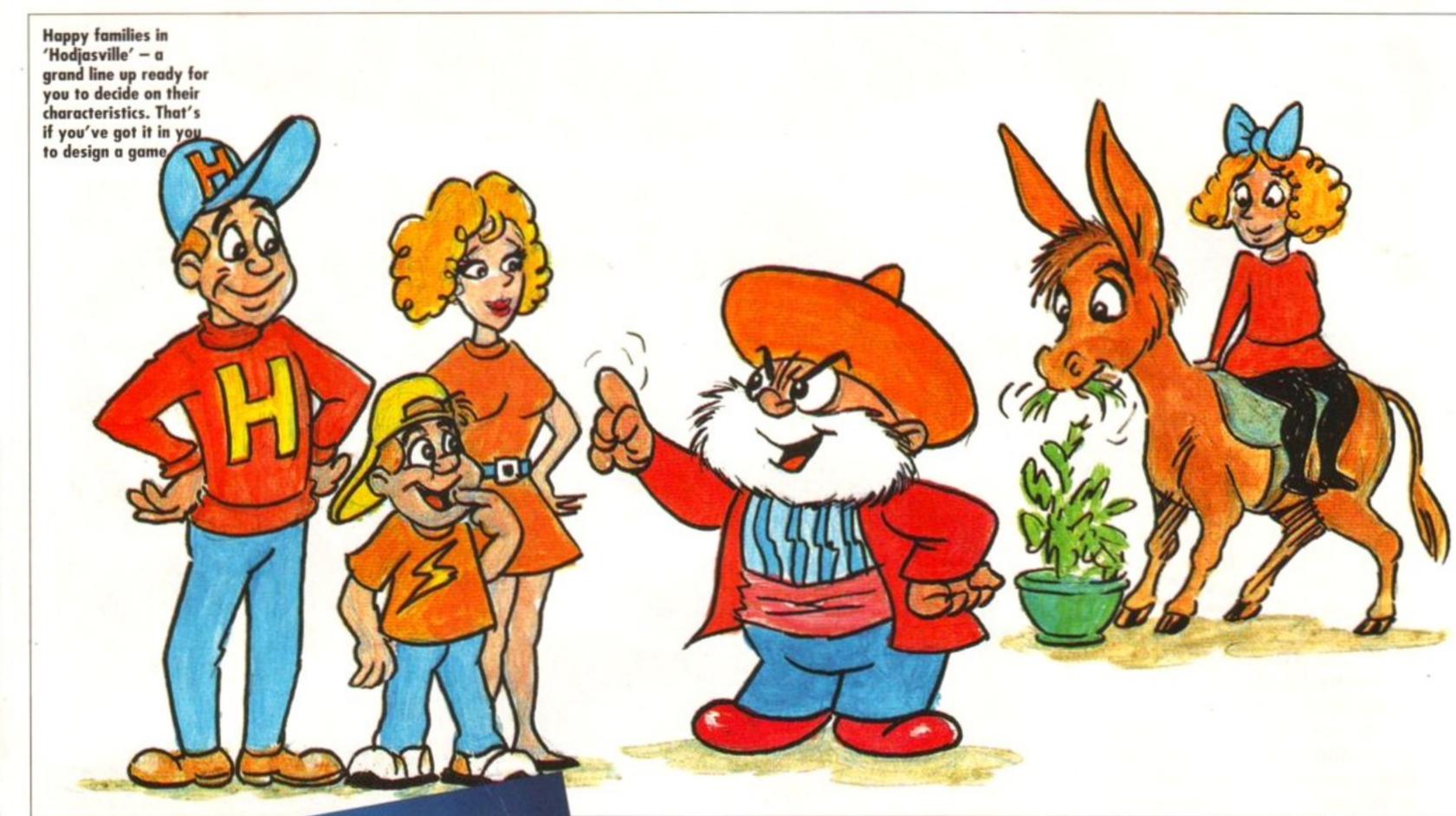
UP FOR GRABS!

WIN! An Amiga 1200

Happy families in 'Hodjasville' – a grand line up ready for you to decide on their characteristics. That's if you've got it in you to design a game

in our excellent design-a-game competition

Fancy Commodore's flagship machine sitting on your desk at home? Then you had better get to work, because this competition's winner gets one.

THE PRIZES

The main prize for the best game design will be a shiny new Amiga 1200! Also, royalties will be paid for every copy of the game sold, so you could end up rich as well!

In addition to this, Vivid Image will be offering another major piece of Amiga hardware as a runner-up prize – more on this next month. So, get your thinking hat on, and go for it!

FOLLOWING THE COMPLETION of their next game Second Samurai (see The Next Big Thing, page 24), Vivid Image are about to embark on their most ambitious project to date.

Hodja is to be a CD-only game, developed for every CD platform available, and Vivid Image want you to design it for them!

Now of course, this isn't just the Vivid Image boys being lazy – after all, they designed First Samurai, one of the best beat-em-ups we have ever seen. No, they've done the preliminary work on the game, like designing the characters in the story and the basic scenarios, and what you have to do is come up with a design for the game itself.

The story so far...

Hodja is the name of a popular Turkish folk hero, who is believed to have lived around the 13th century. His name means 'the learned one', or 'the wisest of men', and he makes his living by telling funny stories, making predictions and giving advice to people. Because what he says is mostly completely made up and untrue, most of his predictions go wrong, so he can't stay in one place too long.

A typical suburban family, whose name you

must make up, hires Hodja for a birthday party. What the parents don't realise is that Hodja practices real magic, but he's not very good at it. He grants the child a wish, which he must ask for while blowing out the candles on his birthday cake. As the lights go out, the boy blows out the candles, and then the lights come back on revealing the family sitting not in their living room, but in the middle of a strange, monster-filled fantasy world. One of Hodja's spells has backfired... again!

Here's where you come in!

Design a game continuing on from the above story. To help you out, Bill Hajee (who animated the mice in the Disney film, The Rescuers, no less) has drawn a rough idea of what the family look like – see the cartoon on the left. He will also be working on much of the actual in-game graphics, so don't worry too much if you can't draw!

Make your design in full storyboard-type form if you can, with detailed pictures describing each of the areas of the game, and some brief text to describe them. If your drawing is not so hot, however, then you can just sketch out the scenes, and write down detailed descriptions of the levels.

The game design must be appealing to the whole family. The idea is that because a family is portrayed in the game, a real family should be able to control the characters. Up to four players may play the game simultaneously, with each playing the part of a family member. There should be an option to switch to any free family member at any point during the game.

A family pet could be included, either a cat or a dog, which would either help or hinder the family's efforts. Alternatively, a baby monster could be befriended by one of the children during the adventure. Oh, and not forgetting, of course, Hodja's beloved donkey, Eshek.

Each member of the family should have different objects (which they were carrying prior to the casting of the spell), which they can use to get rid of the monsters they meet. Also, because the physical attributes of the characters vary, so must their abilities. Typical characteristics could be:

Mother: Pulls children away from potential trouble, screams at monsters, administers first aid and comfort;
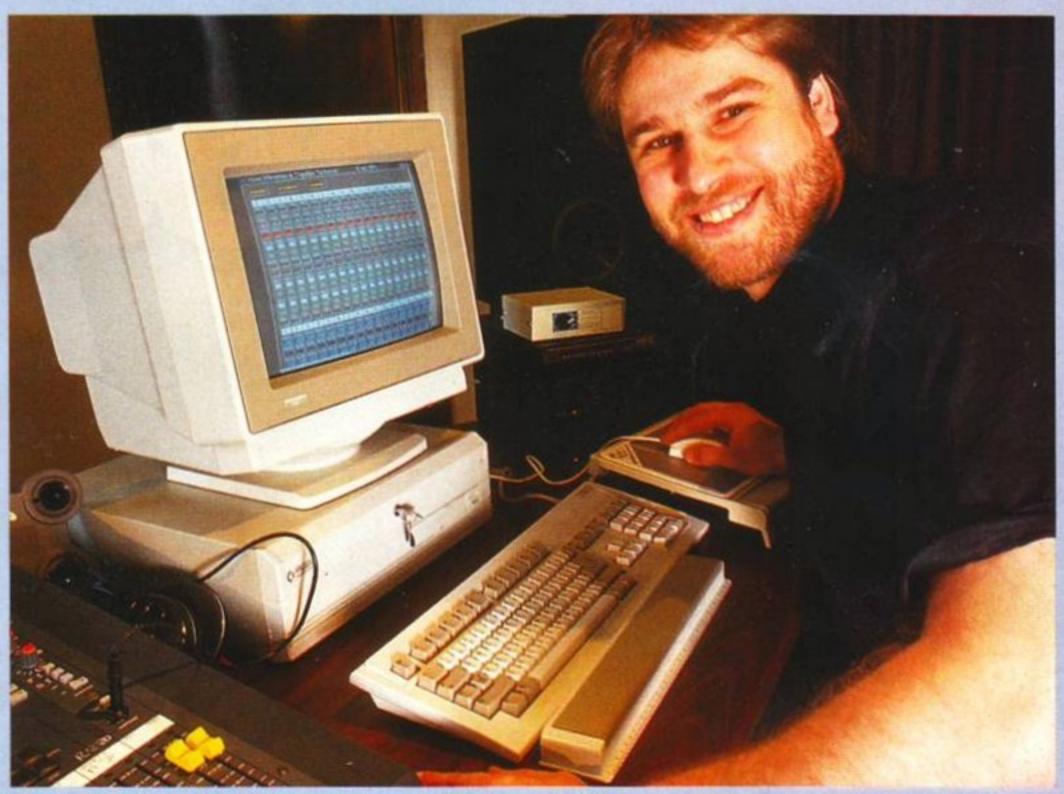
Father: Carries children on his shoulders to give them a rest or help them over obstacles, lifts heavy objects;

Children: Climb trees to attack monsters from above, climb rockfaces with help from the father, and swim well.

To avoid patronising the characters, you will need to introduce much humour and role-reversal. For instance, the father may be terrified of snakes, while the mother may find them cute.

Remember that Hodja is to be designed for CD-based machines only, so there are no limitations for the size and scope of the game. Think of it as an interactive mini-movie, although steer well clear of the Dragon's Lair style of game (all graphics and no gameplay). Try to make it as easy to play as possible, and combine adventure with arcade sequences and puzzles. Above all, have fun! **AF**

Win a day in a top recording studio!

Gre Malcangi shares a studio with percussionist Evelyn Glennie, and if you want the chance to record your own tracks in their studio, you had better start composing your masterpiece.
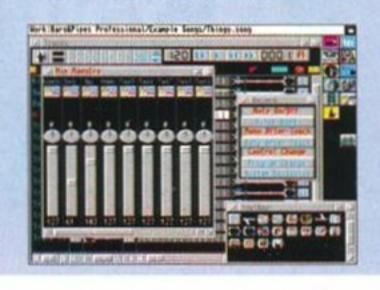
Do you dabble in composing? If you have ever thought about creating music using your Amiga, then now's the time to do something about it! You could win a full 12 hours in a professional recording studio, to record your music using a full set of professional gear, with a recording engineer thrown in to help you out with the difficult bits.

The studio in question is Heritage Studios in Huntingdon, which is owned by top percussionist Evelyn Glennie and engineer Greg Malcangi.

The amount of features in the studio is huge – 20 bit digital recording, 48 channel MIDI, and a list of samplers, effects units and keyboards as long as your arm. At the very heart of the studio lies an Amiga 4000/040 running the excellent *Bars & Pipes Pro 2* sequencing program.

The winner and runner-up of this competition will

The excellent *Bars & Pipes Pro* sequencing program is also up for grabs.

also receive a copy of *Bars & Pipes Pro 2*, rated *FG*90% in issue 46, so the total value of the prize is... oh, huge. So what are you waiting for?

HOW TO ENTER

All you have to do is create a piece of music using your Amiga. This could be using a full-blown MIDI setup, or a simple tracker program (such as the excellent *Protracker* featured on the Coverdisk of *Amiga Format* issue 48).

When you've created your piece, record it either to ordinary cassette or DAT, and send it to Deborah Thackery-Tyres at the following address:

Heritage Studios, Heritage House, Main Street, Upton, Huntingdon PE17 5YF.

Make sure you get your entry in by 8 October 1993, giving you a whole two months to compose your tune. The entries will be judged by a panel including Evelyn Glennie, Greg Malcangi, and a Commodore representative.

Please supply a list of the equipment you have used, so the judges can take this into account when listening to your music.

Lastly – don't send an original master of your music, because it cannot be returned to you.

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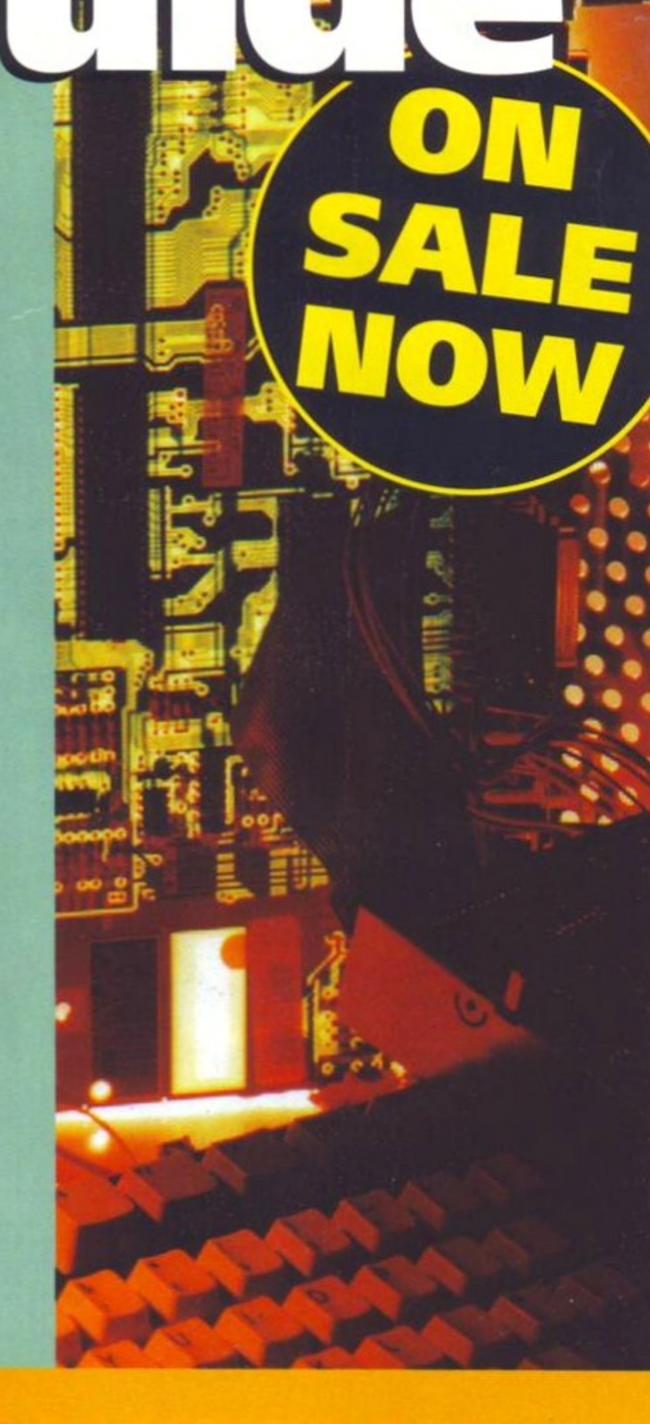
5 You need it to come from the people who produce the world's finest Amiga magazine

6 The price is £3.95 – but it could save you ten times as much.

7 In the shops now – the final detail falls into place. Go for it!

Guide price £3.95

THE REVIEWERS

Everyone's got their own favourite type of game, and at *AF*, we put that to good use. We look at each reviewer's special skills and obsessions and turn them to your advantage. Here's what our team was up to this month...

STEPHEN BRADLEY

Steve 'The Boy' Bradley is often seen wandering around the office with a curried chicken sandwich in each hand. So, we decided he'd be the ideal chap to take a look at the latest McDonalds' licence, *Global Gladiators*.

ANDY NUTTAL

Nutts met a shifty man in a dark alleyway last week who offered to sell him some 'good stuff'. So, in a moment of inspired editorial genius, we set him to the task of mining large quantities of, erm, 'spice' in *Dune II*.

JAMES LEACH

James is a peaceful man who has vowed never to hurt another living being in any way unless it irritates him in some way. You want armed conflict? James is your man. Obviously the ideal candidate for *Campaign Missions*...

MARCUS DYSON

He's been to Australia, you know.

SARAH TANSER

Despite rumours to the contrary, Sarah is a very nice person who does in fact smile quite a lot. However, she doesn't wear leather, and has never ben involved in a punch up with a dinosaur. Despite these obvious problems, she is uniquely qualified to tell you about *Entity*, in as much as nobody else could be bothered to.

RICHARD BAGULEY

What can be said about him that hasn't been said already? Cool, calm, suave, sophisticated and a damn good cook. For such an obvious god-like figure, what other game could there be except *Sim Life*? (*I wonder who wrote this? – Ed*)

TIM SMITH
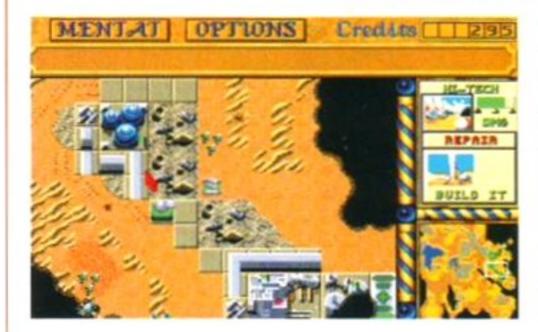
Many things have been said about Tim, but few of them are true. The rumour about him being Italian is a complete lie, for instance. The one about him existing in his own virtual reality is true, though. Which is why he's reviewing *Ishar 2*.

Screenplay

So how can you tell me that you're joystickless? Let **Richard Baguley** take you by the hand and lead you through the streets of Screenplay. He'll show you something that'll make you change your mind...

THAT'LL DUNE NICELY, SIR...

DUNE II

The first *Dune* game was an enjoyable adventure/strategy style romp around the deserts of Arrakis, but Virgin decided on a complete change for their second stab at this film and book licence.

This time, they've gone for a wargame, mixed with elements of trading and strategy. You have to harvest spice from various areas of Arrakis, while watching out for rival families and sandworms. Pilot your ornithopter to...
Page 56

Blade of Destiny

Verily, the Orcs are rising, and you've gone and lost your sword. In this Germanic role playing game you guide a band of hardy warriors, bards and rouges around the Realms of Arkania on a quest for the lost Blade of Destiny. Sounds like any of a number of RPG-style games, but does it have that certain cutting edge that separates the warriors from the wimps? **Page 84**

Entity
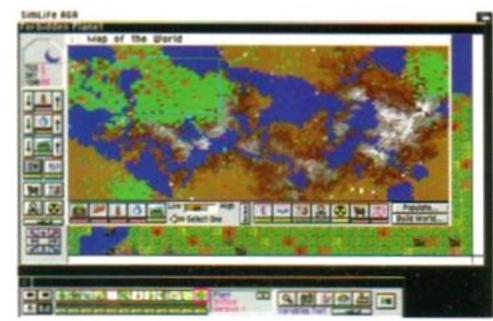
Oh dear. Anthemis' father has been encased in a large block of stone by that nasty Entity chappie, who is now planning to take over the known universe. What a rotter. So, as any good heroine should know, it's time to leap from platform to platform with only a small Bacofoil bikini for company, bashing baddies and saving the planet from imminent doom. **Page 58**

Yo! Joe!

Games writers have been slow to pick up on the possibilities of Molotov cocktails in platform games. They have been especially slow to pick up on the idea of combining cute platform romps with milk bottles filled with petrol and a bit of rag shoved in the top. However, all this seems likely to change with *Yo! Joe!*, the latest platform puzzler from Kompart... **Page 66**

Sim Life A1200

Forget the real world. It's dull and boring. Why not build a completely new world with *Sim Life*? Not only can you build an entirely new planet, but you can populate it with all manner of weird and wonderful plants and beasties. It promises to take us to the places where *Sim Earth* feared to tread. Get your tickets for the voyage of a lifetime on ... **Page 78**

Oh dear, it seems the Atreides boys aren't doing too well over here near the Ordos base. Unfortunately the enemies have a bit of a headstart over you so if you're not careful you'll be outnumbered.

Atreides unit destroyed.

The big blue thing below is my base, the noble Atreides. Because the enemy base is to the north, we have a number of missile turrets to the north of the base. These are automatic, so even when you're miles away you can be assured that your base will be well defended.

To the west you can see two harvesters, which are waiting to be ordered out to the spice fields. To the south there are my prized structures: a hi-tech factory and a repair facility – very expensive, but worth every penny.

CONSTRUCTION TIME AGAIN

To fight battles and mine Melange, you must have troops and vehicles. To build vehicles and train troops, you must build structures. Take one or more concrete slabs, and add one of the following:

ROCKET TURRET
Unmanned, the turret will defend to the death. Useful for putting near your base as an automatic defence.

STARPORT
Enables you to trade with other planets in the Merchant's Guild. Accesses a trading market for vehicles and airborne units.

HI-TECH FACTORY
Produces airborne units, such as the Carryall for transporting units, and the Ornithopter for attack purposes.

SPICE REFINERY
A harvester (provided) mines spice, then brings it here to be refined. Refined spice may be stored in separate spice silos.

PLANES, TRAINS AND THOSE FUNNY LITTLE MEN WITH ASSAULT ROCKETS

The later levels in *Dune II* put a whole wealth of crack troops, battle tanks and strike vehicles at your disposal. Combat Tanks, Ornithopters, Rocket Turrets, Fremen – you name it, it's there for the taking.

Below we've listed just a few of them for your delight and delectation.

QUAD
A four-wheeled vehicle which fires armour-piercing incendiary rounds. Quite slow, with reasonable armour and firepower.

SIEGE TANK
A tracked vehicle with dual cannons, giving it twice the firepower of the other smaller combat tank.

Dune II
Battle For Arrakis

A good tactic is to surprise the enemy by creeping up on them from behind. Of course, you'll need somewhat more firepower than this to defeat the Ordos base on level six (this one), but even a couple of tanks can be a good diversionary move while the really big guns move in from the south.

When Virgin produced Dune a year ago, it received a lukewarm reception from reviewers. Can it do better the second time around?

DUNE II
is available from
Virgin Games
081 960 2255.

A s if the situation on Dune wasn't bad enough. The Ordos, the Harkonnens, and the Atreides have been battling it out over the valuable spice Melange for years now, and quite frankly the galaxy is getting sick of it. So what does the Emperor do? He sticks his oar in with a challenge to the three families, offering full control of the planet Dune, and its rich supply of Melange, to the prevailing House: "The House that produces the most spice will control Dune... There are no territories, and no rules of engagement." Very clever. Typical of a governmental leader to poke his nose in where it's not wanted.

Anyway, it sets a good scene, and Westwood Studios – producers of the *Eye of the Beholder* games and *Legend of Kyrandia* – have taken advantage of this and created a crackingly good game.

Nurturing nutmeg

As far as complexity of game goes, *Dune 2* beats most others hands down. Although the plots are pretty basic – mainly 'Wipe out the enemy' or 'Make X amount of credits', the strategies required get incredibly complicated. This is partly because it's up to you to build up your base from scratch, and to begin mining spice to create money which you can then spend on making new structures, military vehicles, weapons and armour.

In *Dune 2*, in a similar way to *Syndicate*, the latest game from Bullfrog, it pays to invest money in armaments and instruments of war. With roughly 10 levels for each House, the enemies just get harder to beat – so you really need the extra equipment to keep your army on top. Actually, 'on top' could be the wrong phrase, because from the start of the game you are up against armies which are stronger than yours. In fact, you often feel like giving up after the ninth or tenth go at completing a level, but then you think of a different strategy, try it, and it works. It's all a case of keeping a clear head, and never admitting defeat until the enemy have knocked out your final battle tank.

Although the missions do seem a bit repetitive, each is quite different from the last – with new technology becoming available each time. Once the enemy begins attacking, there is no let-off period until the battle is won or lost. The best strategy is to build as large a base as possible, and as many troops as possible, before you attack. This means that you

maintain a steady flow of credits throughout the battle, so the inevitable casualties (and there will be many of them) can be replaced fairly quickly.

On level four, you'll find the Emperor's troops, or the Sardaukar (known as 'purple sleems' by the *Amiga Format* staff, see Actual Reality, page 177) joining forces with the enemy and attacking your base. It seems the Emperor has a sense of humour. Oh, and the sand worms appear on this level as well, so make sure you don't wander across sand for too long, or you may find yourself swallowed into a gaping, sandy maw...

The great escape

Sometimes, during a long battle, you find yourself wishing there was a way of running away and hiding for a bit, to catch a breather. Either that or some kind of 'smart bomb' which kills all known enemies within 100 paces, or something – but that would be cheating, of course. (Mind you, if you play as the Harkonnens you get the chance to develop a beast called the Devastator, a nuclear-powered nerve gas-firing battle tank, and this does have a self destruct button which takes out everything around it.)

With a game of this quality it is difficult to find anything bad to say. I could mention that sometimes your vehicles refuse to move when ordered to the opposite side of a structure. Instead you must lead them around the structure step-by-step, which can be quite annoying. Also, if you only have one floppy drive, you have to complete a silly number of disk swaps before you get into the game.

Dune 2 is addictive. If *Syndicate* could be described as *Populous 2* with guns, then *Dune 2* is *Sim City* with heavy artillery. Dark, moody, atmospheric, addictive. Brilliant.

Andy Nuttall

MOBILE CONSTRUCTION VEHICLE
A scout vehicle transforms itself at will into a fully-functional construction yard. Useful for changing location of base.

INFANTRY
A squad of three light-armoured foot soldiers, equipped with assault rifles firing armour-piercing rounds.
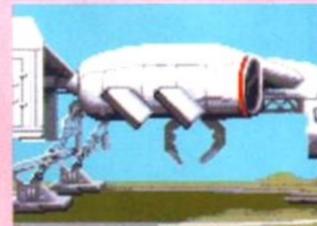
COMBAT TANK
A medium-armoured tracked tank, firing high explosive rounds. It may be slow, but it's highly effective.

CARRYALL
A light aircraft, moves harvesters to and from spice fields, and returns damaged units to be repaired from battleground.

ORNITHOPTER
A very light aircraft which carries battle support rockets. Highly manoeuvrable, and the fastest aircraft available.

SONIC TANK
A medium-armoured tank, which fires a blast of sonic energy at its target, breaking down its molecular structure.

Dune II
Virgin ■ £30.99

● Excellent *Sim City*-style interface, which runs smoother than, um, a baby's bottom. (Er...)

● Well-sampled sound effects, including male and female voices, create a moody, tense atmosphere.

● Once the action begins, you aren't allowed so much as a breather until the battle is over – and if you win, it just gets harder.

AMIGA GOLD FORMAT 90%

`SCORE 000000   LIFE 04   ENERGY 91`

Anthemis soon realised that she was no longer in her home town, and that her mother had turned into a fire-breathing Tyrannosaurus Rex.

For the UK distributor of ENTITY phone Loriciel on 010 331 46882838

Entity

Nice outfit – I hope the weather holds good for you. But won't the tin foil get hot in the sun?

We're at the finals of Miss UK 1993 and it's time to meet some of the contestants… And now over to Terry who's talking to one of the entrants, the star of *Entity*, Loriciel's latest adventure.

Terry: Anthemis, I understand you overcame a great hardship to be here tonight.

Anthemis: Yes Terry, I had to save the planet from the terrifying Entity before coming here.

Terry: Really, how interesting. You come from a family of achievers. I believe your father was the head of the council.

Anthemis: Yes, Daddy's greatest moment was when he encased the Entity in a monolith.

Following that he was elected to the highest position on the council, the Grand Sage.

Terry: I understand your father has not been seen for some time.

Anthemis: Yes, Daddy disappeared recently and the last I heard from him was a video-message. I was very shocked to find that he had been reincarnated into the very same block of stone that encased his arch enemy, the Entity.

Terry: Was this so that he could keep an eye on her?

Anthemis: Yes. Unfortunately the Entity broke free before Daddy could warn the world.

Terry: So you were the only person who could save the world?

Anthemis: Yes.
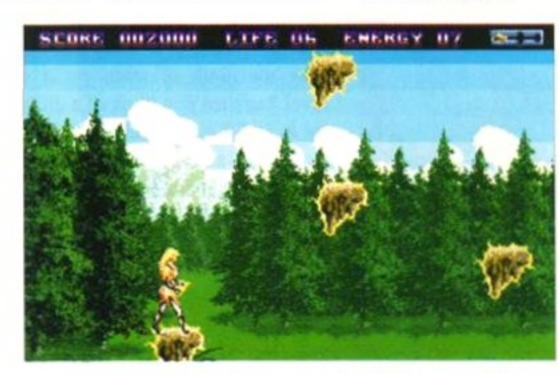
Terry: Aren't you a bit short in the muscle department to fit into the standard superhero category? (*Audience laughs.*)

Anthemis: I'm one of a new breed of hero – the heroine. Just because we like to wear nice clothes and make-up, it doesn't follow that we don't want to wield a sword or fling firebolts at innocent animals once in a while.

Terry: As long as you don't smudge your lipstick or ladder your stockings. (*Smug smile.*)

Anthemis: I had to fight the monsters con-

trolled by the Entity wearing less foil than your mother wraps around the Christmas Turkey! I'd like to see you run around and climb mountains while trying to stop the strategically placed bits of foil from slipping off and exposing areas best left covered. You don't get scantily clad girls in upmarket games such as *Flashback*, and even *Lionheart* modestly covered some of his many muscles.

Terry: But were there any allowances made for you being female?

Anthemis: Well, I lost energy when I fell off vanishing platforms and even when I jumped too high. I suppose that's the price for being a woman. I still had to collect the pieces of the Sceptre of Bismuth, fight the guardians of the five worlds and find Erinwhe's magic boomerang to defeat the Entity.

Terry: Erinwhe's magic boomerang? Are you serious? First your father is reincarnated as a block of stone, you prance about wearing strips of foil and then the only thing that can kill the Entity and free the world is a boomerang.

Anthemis: I don't think you're taking me seriously. There were five worlds to beat, the Prehistory, the Mountains, the Forest, the Caves and the Apocalypse. It was no picnic, and I'd like to see a presenter like you get through that lot.

Terry: Too much like hard work. I think I'll go and play *Flashback* instead. And cover yourself up before someone mistakes you for a turkey with plenty of breast for everyone! (*Audience applauds*)

Sarah Tanser AF

`SCORE 001000   LIFE 04   ENERGY 92`

Poor Anthemis. She can't go for a walk in the country without some creature losing its head over her.

`SCORE 002200   LIFE 06   ENERGY 99`

Fear struck Anthemis to her very bones as the ice-capped Alps rang with the mating call of the Mountain Poncho.

`SCORE 002000   LIFE 06   ENERGY 97`
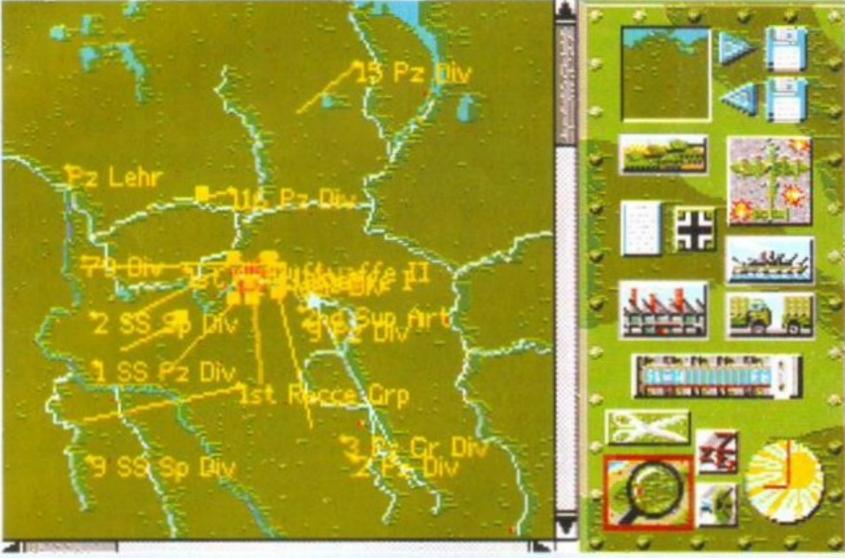
As she approached the clearing, Anthemis saw something that made her gasp. The levitating rocks had returned.

As the trap closes on Berlin, you'll be glad you decided to play the allies. The Germans are desperate and, to be honest, haven't got a hope (who did they think they were kidding).

Campaign –
From North Africa to Northern Europe
Empire ■ £15.99

HARD DISK INSTALLABLE

When you bought *Campaign*, you got the major Allied vs Germany land battles of 1943/44. It successfully combined three-dimensional battle sequences with strategy and simulation tactics. The strategy centred around making high-level tactical decisions which could make the difference between winning and losing a battle. With this new disk it goes a step further down the history line.

Northern Africa saw quite a bit of tank-related combat, with Rommel and Monty gunning for each other in fine style. Deserts are good places for big armoured battles because not much gets in the way. Although this isn't the entire reason they were all there, it makes for an interesting scenario in *Campaign*. You must drive over hills, down wadis and through mine-fields in order to have your violence, and great fun it is too.
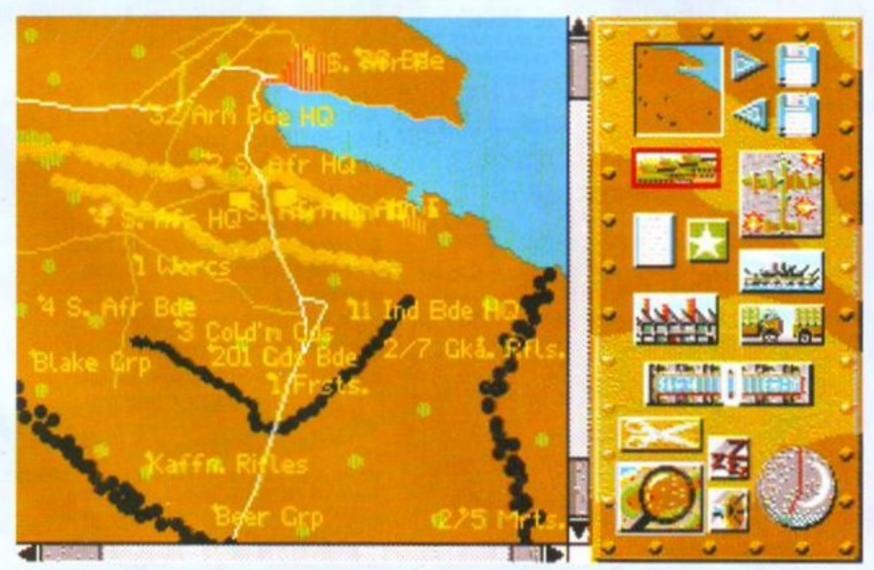
But let's not forget the spirited, but ultimately, futile defence of Berlin by the Germans. That's here too. In fact there are 25 maps, each depicting a different land scenario. Russia gets a look in as does Italy. In fact there's a whole world war in this mission disk alone.

It's all much of the same stuff, except in different places. If you're a veteran *Campaigner*, you'll be pleased with the breadth of this, but if you're expecting anything really new and surprising, you're barking up the wrong tree.
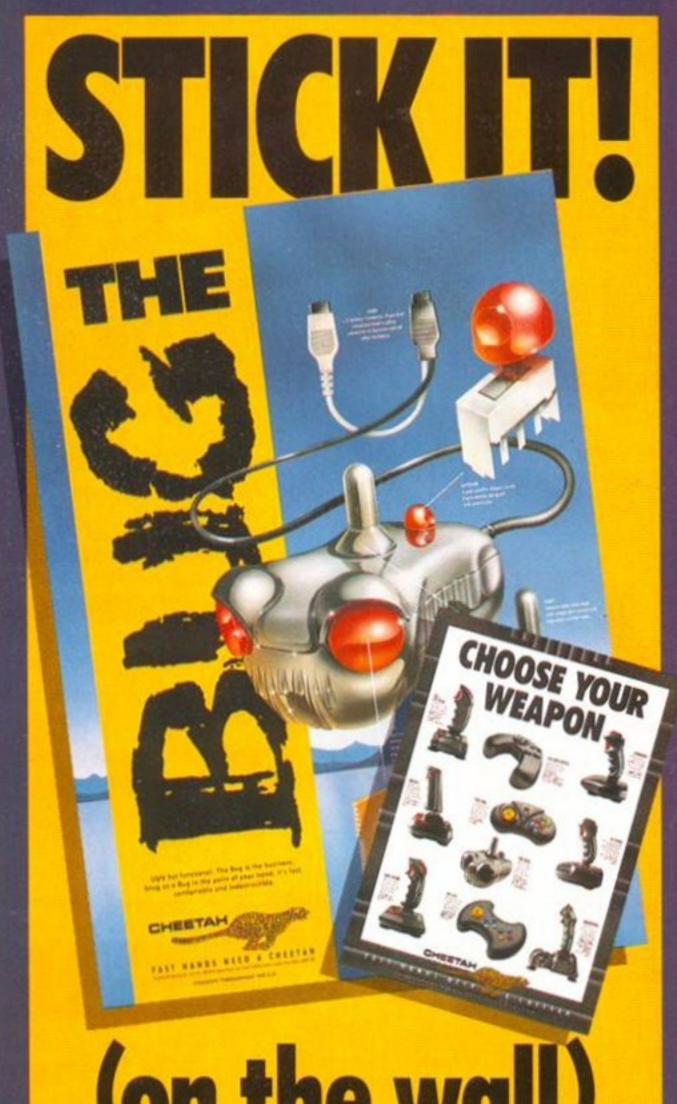
But 25 scenarios, thousands of tanks, tons of airpower and the odd supply truck can keep you well engrossed for long enough to feel you've got your money's worth. And you can edit the maps and forces as well. It's great, although it does help if you're a *Campaign* fan in the first place. Oh, and to whoever wrote the manual, it's Rommel's North *African* Offensive – he never got round to a North American one.

Verdict 82%

James Leach

That rather attractive nice brown desert is perfect for mass tank action, car rallies and sunbathing. Careful as you go though. Don't drive over the black splodges – they're mines, you see.

Global Gladiators

This is a global platformer, backed by big global corp McDonald's, but don't let that put you off...

Mick and Mack. Mack and Mick. Just a couple of regular gum-chewing, gun-toting kids. Except these kids are on a mission. It's a dirty world out there – needs cleaning up. Multi-racial harmony is their aim. Polution, all around. Sometimes up, sometimes down. But always around. Slime World first. Hell of a place, a sort of slimey Fungus the Bogeyman land. Everything's gone a snotty shade of green.

Now a short word from our sponsor. "*Ladies and Gentlemen, boys and girls, are you at a loose end? Need a bite to eat? Then why not go own to your local McDonald's fast food store, nutritious food our speciality. McDonald's burgers, McDonald's fries, McDonald's Cola (and a piece of pie) – a sure remedy for all your ills. With service friendly, and toilets clean, McDonald's is somewhere for you, your friends and family to cherish for evermore.*" Ooh, sounds great.

Various shades of green

And so the kid sets out. Only one mind. You can't be Mick AND Mack. Heck, what do you think this is? Zap. Gotta a bit of slime there. Whoa! What's that? Flying slime. Zap. Not flying any longer. And the thing is, this zapping is fun. Sure you take a bit of slime on board now and again, but hey, it's all part of the game. But I'm telling you man, the feeling of zapping those slimeballs is nearly as great as the taste of those damn burgers.

And there sure are a lot of platforms out there, and collecting those McDonald's arches is getting tough. Got to the end of the level

once, but the guy in the clown outfit says I gotta get more before he'll let me through. What a drag. Well it ain't that bad 'cos you just turn around and charge back into action. And check out the speed when you're on full revs. Head down, hot diggity dog that's fast. But don't get too cocky because problem is, you're often running along, you take a leap and you don't know where you're gonna land.

Now friends, some might say that this is not cool. I mean, who wants to land in a slimey pond when they could be taking in a chocolate shake? But I think it makes it kind of interesting. OK, you can go down wailing, but you get up off the ropes and get going again.
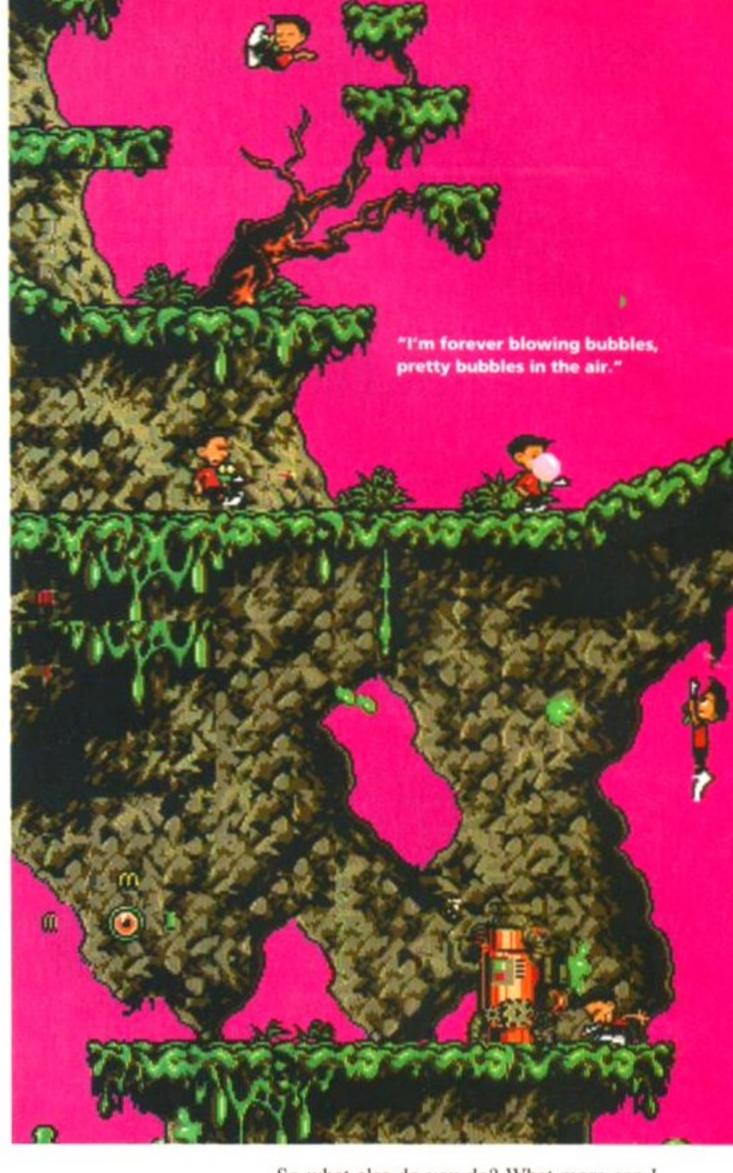
You slimey toe-rag, you

Short interlude. "*Kids, we at McDonald's like to think we give you guys more than just burgers. In conjunction with Virgin Games, we have given you kids a platformer you can be proud of. We've put the P back into platform. You want cute? This is goddamned cute. And you want eco-friendly? Heck, this washes whiter than Persil – it's stronger than dirt.*"

So you've done them in cold-slime, but it ain't over until the guy in the clown suit waves his flag. And then you've only cleaned one level of one world. There's whole heaps more. Head for the forest and blow away some animals. Hey, that's not cool surely? Alright, so they're chucking things at you, but blowing them away seems a bit harsh. I thought they were conker-chucking monkeys. Still, what's a guy gotta do, but watch the streams where mad fish with jaws the size of Jaws snap at you.

"I'm forever blowing bubbles, pretty bubbles in the air."

GLOBAL GLADIATORS is available from Virgin Games on 081-960 2255
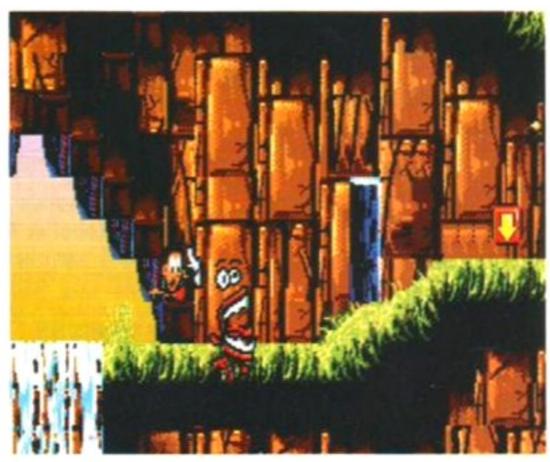
So what else do you do? What more can I say – it's a perplexing platform game and you jump around loads, shoot and collect things. That's what you do in platformers. Head off for Toxi-land and do battle with dustbins (garbage cans sounds more appropriate), pneumatic drills and various other nasties, and then on to Arctic World with snowball-chucking polar bears.

Sounds easy? Well it ain't. The levels are quite large and the baddies keep on coming. So what if the scrolling does lurch at times, and that you occasionally commit suicide because you're jumping blind. Forget about the McDonald's propaganda (go on, admit it, you wouldn't mind a burger – just a little bite) and get out on the ball park and play the game.

Stephen Bradley ☺

Mick takes on the full might of the Forestry Commission. No snake in the grass is going to make a monkey out of him.

"Whoo, whoo, whoo, whoo, whoo, whoo." Fish pretending to be Red Indians always frighten the life out of kids.

Global Gladiators
Virgin Games ■ £30.99

- A slime-zappin', conker-crackin', bin-bashin', bear-biffin' humdinger.

- Loads of levels and four worlds with a 'special' bonus level to boot.

- The sprightliest sprites this side of Spritesville, Spriteland.

- Some might find the blind- jumping off the edges a bit annoying.
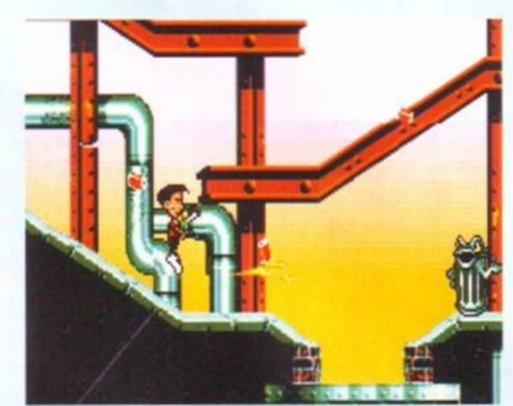
Verdict **86%**

WHO WOULD HAVE THOUGHT THAT IN THIS MCDONALD'S WORLD THERE WOULD BE SO MANY HAZARDS
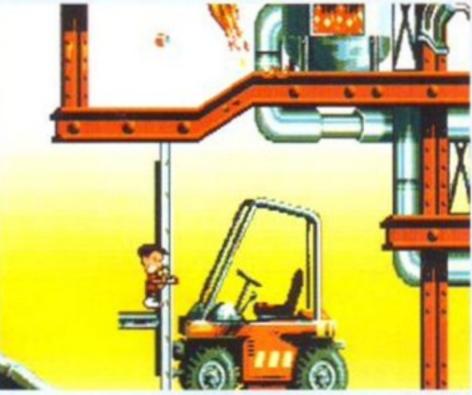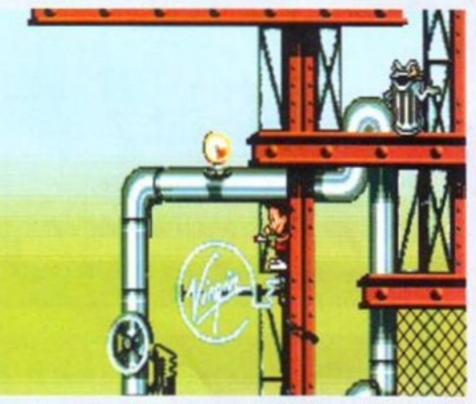
Mick wasn't sure whether the garbage can was laughing at him or just looking at him in a funny way.

I say, is that a McDonald's Cola can flying around? What? It's a Coca Cola can. Say it. Coca Cola, Coca Co...
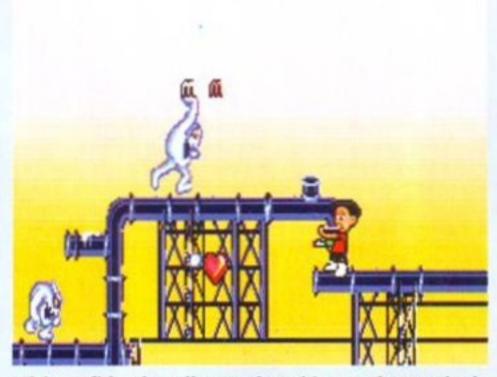
Mick, surely you're not thinking of blowing away that Virgin neon sign? You are? Well alright, go on then.

Oops, watch your step. Why is this globally conscious gladiator being so nasty to the cuddly polar bears?

Mick confidently pulls gum from his mouth, seemingly oblivious to the on-coming slaughter of the bears.
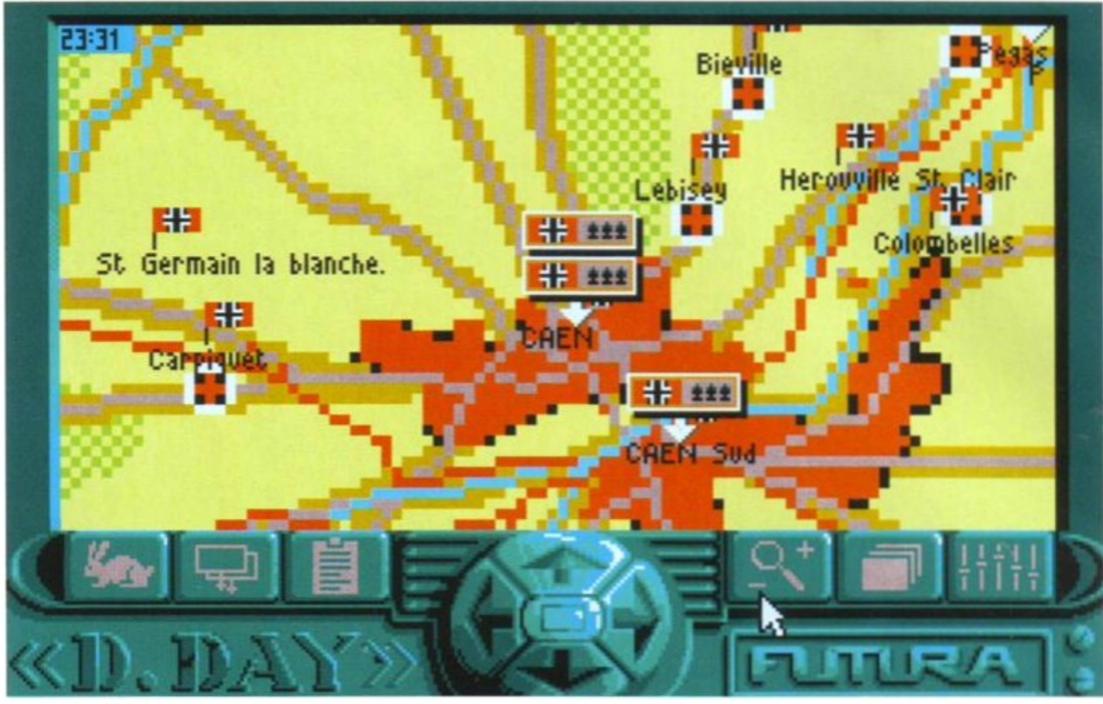
"Don't fill me full of slime man, or kill me in cold slime. I'll buy you a nice Burger King." Squelch.

Does US Gold's mix and match wargame offer four sims for the price of one, or just a quarter the gameplay? Once more to the beach dear friends, it's time to liberate D-Day!

Overlord campaign allows you to choose things like ensuring der fuhrer's having a kip!

D-Day

Operation Overlord was not single front battle. Bombing raids, paratroop drops and beach landings all combined to create a secure allied bridge-head in Europe. Fittingly, *D-Day* is composed of the self-same elements, with some tank-on-tank action thrown in to spice things up.

As a collection of sub-games working through a tactical map, *D-Day* has no real heart. For impact it relies solely on the power of four games. If these games had been brilliant *D-Day* would have been too. But sadly they're not and the result is a stop/start campaign that's patchy in the extreme. The mix of 2D arcade games and 3D simulation fail to meet their objectives so *D-Day* barely makes it to the beaches.

War huh!

The 2D arcade action sequences deal with the grunts and the paras. The infantry have to fight their way out of each landing zone and then storm across country doing all kinds of unpleasant things to tanks. The paras don't even get to fire a shot, content to just float down over a moonlit France looking for the signal fires those nice resistance people have started.

The infantry battles are fought on a man-by-man basis. A

NEEDS 1 MEG

D-DAY is available from US GOLD 021-625 3388
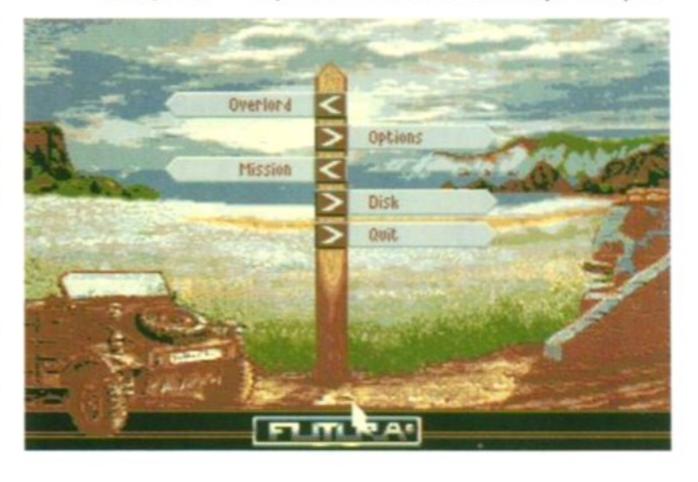
scrolling isometric map is displayed and by clicking commands you give the orders to individual soldiers. The four different troop types (medic, rifleman, grenadier and mortar) have to be used in concert to defeat the enemy. It's fun but lacks any tactical depth. Once you've acquired an idea of each weapon's range, the only trick is moving your boys around without being shot. A weird mouse driver and some particularly dim troops do their best to make life tough, but the basics are easily mastered.
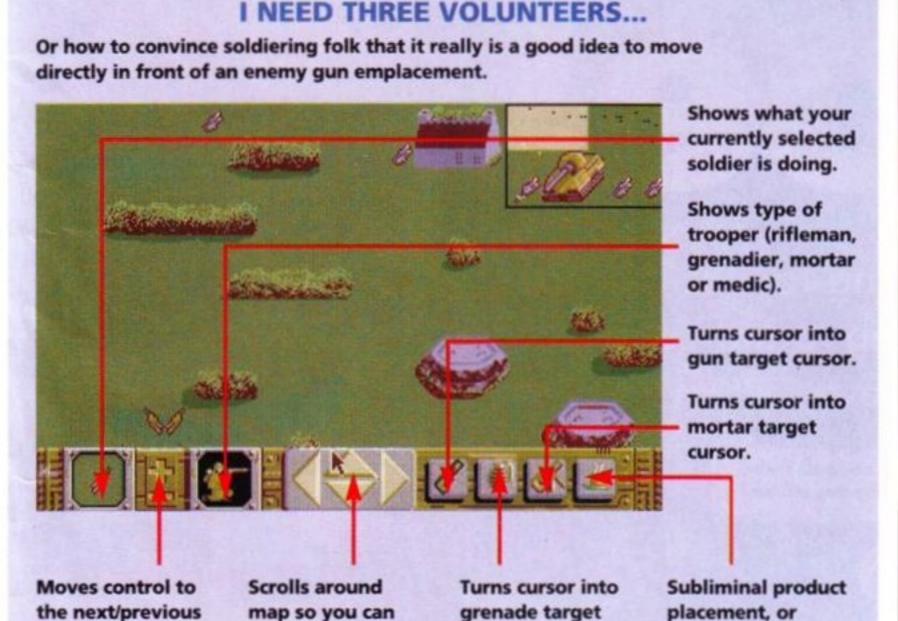
What is it good for?

The paratroop drop suffers a similar simplistic fate. The split-screen display focuses on a single trooper (at the top) and his relative position on the ground (at the bottom). Using glide left, glide right, float and plummet commands, you have to nudge him against prevailing winds on to a pre-prepared landing sight. If they miss they die at the hands of the enemy, while para-

Who do you think you are kidding Mr Hitler? The full Operation Overlord campaign allows you to choose things like ensuring der fuhrer's having a kip!

In a spooky real life imitates art accident, the real generals in this game look exactly like the actors who were in *The Longest Day*.

I NEED THREE VOLUNTEERS...

Or how to convince soldiering folk that it really is a good idea to move directly in front of an enemy gun emplacement.

Shows what your currently selected soldier is doing.

Shows type of trooper (rifleman, grenadier, mortar or medic).

Turns cursor into gun target cursor.

Turns cursor into mortar target cursor.

Moves control to the next/previous trooper.

Scrolls around map so you can view the enemy positions.

Turns cursor into grenade target cursor.

Subliminal product placement, or maybe pause?

---

troopers whose 'chutes touch suffer a canopy collapse and fall from the sky.

The trick is getting a large number of floating folk to stay as far from each other as possible, until the moment they hit the same small patch of ground. Cross-winds and the introduction of huge numbers of paras inject an enjoyable chaos to proceedings, but they don't stop it feeling like a Lunar Lander clone where the engines have malfunctioned.

Of the two 3D modules, Tanks and Bombers, it's the AFVs that are the best. Once the beachheads have been established it's the armour that has to smash a hole the German lines. Using viewpoints for every crew member, and a few outside perspectives, you have to guide squads of Sherman M4s so that they can beat-up on Rommel's boys.

Controlling a number of tanks and switching between the required views, means life is hectic but challenging. The 3D is not the best ever seen in Amigaland but it works; allowing you to conduct all-manner of armoured tomfoolery. Even the long waits between screens can't dispel the tension and claustrophobia felt during the heat of battle.

Absolutely nothing!

Bombing is another tale entirely. Trailing along behind your B-17, the mission is to knockout enemy installations and forces. Here the sluggish 3D kills play stone dead. Your bomber meanders around the sky hunting down the large green arrows that mark the targets. You just fly to them, open the bomb-bay doors, miss hopelessly, circle around and repeat the process. It may seem unfair to criticise a bomber simulation for being slow – the B-17 wasn't designed to be agile – but there's no spectacle to pull you in. There's nothing to encourage you to stick with the program long enough to learn its secrets.

Compilations of sub-games need to be woven tightly together if they are to work well. *D-Day* tries its best. As the Operation Overlord campaign proceeds you watch the big picture unfold on the main game map.

From here you join specific battles, hoping to push the odds in your favour. Success in one area – say a paratroop drop – allows you to force the invasion corridor a little wider, while failure can threaten the entire operation.

Say it again

Multiple sub-games should ensure a varied pace and challenge, but *D-Day* never attains the necessary balance. The 2D arcade sequences are too easily mastered and the 3D bombing runs, which are vital to the missions success, are too dull to suffer for long. Which leaves the tanks as the only section you actually want to play.

Futura have worked *D-Day* hard. Excellent animation, digitised 'stills' and neat menus mean that it initially appears to be a polished package. It looks good and the first few forays into each of the four areas are fun. These games are all too small to meet the game's grand ambitions, though. *D-Day* tries to be a multi-faceted operation that calls on a range of gaming skills, when in reality it's a collection of four combat games that range from mildly diverting to tediously dull.

Trenton Webb ⊕

D-Day
£29.99 ■ US Gold

- Infantry: enjoyable but easily mastered shooting.
- Paratroopers: fiddly but fun. Aim for the church tower!
- Bombers: slow, dull and twitchy.
- Tanks: multi-vehicle armoured fun for all the family.
- *D-Day*: too unbalanced to be enjoyable for a whole campaign.

Verdict **59%**

Yo! Joe!

Yo! Yes it's you I'm talking to, not that Joe bloke. He's to busy running round Cutesville throwing, would you believe, petrol bombs!

The big portraits hold a nasty surprise. Hit 'em!

The start

Avoid the spikes, they mean instant death.

That hole looks interest-ing, why not go down?

Ah! Beca Day of t

Hum! A molotov cocktail, I bet that'll come in handy.

A quick bang on the chest gets that treasure out.

It looks like Joe's in for an early bath.

Joe and the fish don't always see eye to eye.

This weapon is great for killing rats, and zombies, don't miss it!

Guess who's coming to dinner? No not Sidney Poitier, more like a relative of Peter Cushing.

AF GAME REVIEW

Ah!. So that's what a magical energy restoring shower looks like!

YO! JOE! is available from Kompart on 0727 868005

Down the hatch, chute, slide or whatever.

...'s like a scene from ...d, that's why not.

"C'mon then you life-less zombie mother!"

NEEDS 1 MEG

Platform games, you either love 'em or you like 'em a lot. Unless you hate them, but then you'd be a really sick individual. I mean what could be a more perfect game form? They manage to combine the hand to eye co-ordination and finesse of the finest sports sims, the deep thought and strategy of the best management games, while at the same time the speed and reaction of the greatest shoot-em-ups. Plus they include the brain teasing element of puzzle games. If God had ever invented a computer game, instead of (allegedly) creating the world, the land and the seas and all the multitudinous creatures thereon, he would surely have written a platform game. Probably *Rainbow Islands*, but quite possibly *Yo! Joe!*.

Platform games come in two kinds. The incredibly cute and colourful kind like the aforementioned *Rainbow Islands*, *Rodland*, and *Robocod*. And the dark and atmospheric kinds like *Gods*, *Myth*, et al. Here, in the shape of *Yo! Joe!* we have a bit of a hybrid. The scrolling, small sprites, flip intro and music are all from Cutesville, Tennessee. The pick-ups, weapons, levels, baddies and bosses are all from a place far more funereal in atmosphere.

Sexually challenged terrorists

Joe has probably been hideously put upon in some fashion. Maybe his father has been kidnapped by Bangladeshi terrorists, or his homosexual lover abducted by an evil dragon from the planet Sleam. The details aren't important, and to go into them here would probably just add fuel to the flames of the sexism in computer games argument. The plot doesn't matter, who ever bothers to read the flippin' manual anyway? The crux of the matter is that you've got to get from the start of the game to the end without expending a predetermined number of lives in the process.

If you've never played a platform game

before, welcome to the planet. If you have, you'll get the general idea of this little romp in no time. But *Yo! Joe!* is no ordinary platform game. If it was I'd have been going to bed before dawn for these past few days. *Yo! Joe!* is that rare, and much treasured, thing – the truly great platform game.

The difficulty level is just right, and progresses in a way that keeps you coming back for more, rather than sending you heading for the pub in a fit of righteous indignation. When you lose a life in *Yo! Joe!* you know you've only got one thing to blame, and that's your own unwieldiness at joystick waggling. Which means you pick yourself up, dust down your pride and get stuck straight back in.

Come down our local

It would be easy to say too much about a platformer. With *Yo!Joe!* there really is no need. It's just a perfect example of the genre. I personally guarantee that you will love this game. If you don't, come down to Hatchetts pub and I will buy you a pint.

Yo! Joe! is huge, what you see here is just a portion of the giant first level, and it's excellent. Games like this come along far too rarely, and occasionally they fail to receive the attention they deserve. Don't let this one pass you by. *Yo! Joe!* is a complete stunner.

Marcus Dyson AF

Yo! Joe!
Hudson Soft ■ £26.99

● Takes platform games where they've been before, but does it with style and aplomb.

● Keeps you coming back again, and again, and again, and again, and again...

● Not fast, not furious, but fascinating and most importantly, fun.

● A game with no obvious downside.

● Programmed with thought, care and attention... and it shows.

AMIGA GOLD FORMAT

91%

GAMES MASTER

Sega! Nintendo! Amiga! More!

Issue Eight August 1993

MEGA DRIVE

Splatterhouse 3, Techn_
Clash, Amazi_ T_
and many m_

SUPER

Bubsy, Stri_
Pond's Cra_
Shadow R_

A_

Sy_
Gu_
ple_

PL_

PC E_

COMBAT SPECIAL

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(All you've got to d_ tell _

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Hang out with Zeloran, Targhan Eliandr and the rest of the *Ishar 2* gang at Jon's Island

Ishar 2

If you're an RPG adventurer, *Ishar* is in your top 10. But can its follow-up give you the same thrills?

Sequels. Are they just cash-ins or stronger structures built on the bricks of an earlier success? Are they nothing more than the same old game engine with a few different bits of scenery lobbed in?

Sequels have picked up a bad name over the years thanks to the likes of *Jaws III, Rocky IV, True Grit II,* and *WWF European Rampage*. Slush and rubbish.

But on the other hand there were the good times, as represented by *Speedball 2, Eye of the Beholder 2, East of Ealing, Batman Returns* and *Aladin Sane*. The most important thing about sequels is that they should add

something to the original and that they shouldn't detract from the charm and special qualities of the first.
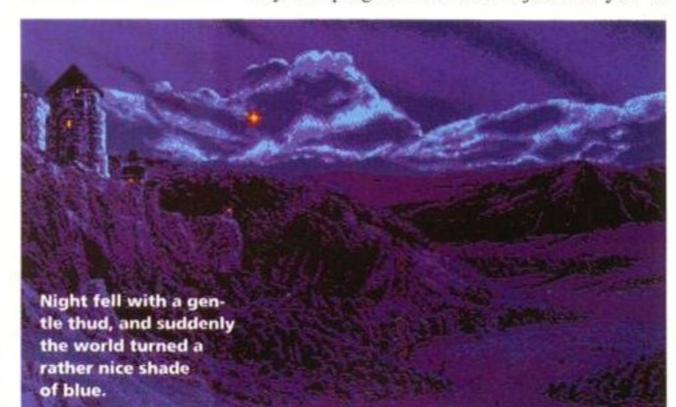
Oh, it's all so complicated philosophically. You just bet that Barry Normal and Harv 'n' Hank (or whatever the hell those Americans who only lasted half a series on Channel 4 were called) worry about this kind of thing all the time. And with the Amiga games industry coming out of its childhood and emerging into its early adolescence, you are going to be confronted by more and more of these sequels.

Here's a funny thing... we had a laugh getting a review copy of *Ishar 2* that wasn't in French or German. It appears that our European cousins adore this kind of RPG romp through an historical hotch-potch of impressionistically painted back-drops more than we do, because getting an English version took weeks. And even then we ended up with a copy that still has the odd errant French word floating around the place ('Ouille!' leaps out at you when you press on the Eye icon). Still, we are reliably informed that this is the finished version, so allonz-y mes enfants!

Mything you already

So off we go. What's the rich, kinda medieval, legendary story that underlies your journeying and a-tasking? Who cares frankly, it's quest, fight, quest, fight, run away, sleep, eat, fight, run away, sail a bit and quest some more in a heroic, but you could be chaotic-good, sort of manner after recruiting a few mates for the fighting and magic bits.

There is actually a tale of evil and heroism, of intrigue and myth, underlying this whole thing, but details really are irrelevant. In fact the details are so irrelevant, you wonder why the programmers didn't just tell you to

Night fell with a gentle thud, and suddenly the world turned a rather nice shade of blue.

This is a map. Isn't it strange how the place you want to find is always on the missing page of your city streetmap?

Things are really starting to happen at Jon's Island, especially since Grinzel came on the scene and introduced us to her friends with the beards and tin hats.

wander around for a while, being irritated by people who just stand in front of you, in a sort of painted way that was all too familiar from third year art students, who were called Carl and into Bauhaus, "like imaginary art like those *Yes* covers" and books called *Revenge of Arzugard* (now that's what you call a sentence!). That's not to say that Carl couldn't paint a little bit (you should have seen the back of his denim jacket) he could, and so could the bloke who paints all the atmospheric backdrops and non-player characters in *Ishar 2*. It's just that the word that springs to mind is 'static'.

Believe me, the in-game graphics are stupendously gorgeous when compared to the amateurish daubings that (dis)grace the flimsy manual. Have these people not heard of screenshots?

Maybe it's having played *Hired Guns* of late or maybe it's having played *Eye Of The Beholder* a while ago, or maybe it's having played *Dungeon Master* years ago that leads you to expect that a game should have moved on. A little bit more movement or a little bit more fluid movement would be appreciated.

Arrete a bit though. This doesn't mean that *Ishar 2* is a creaking old pile of cack. Far from it. The people who played and enjoyed the first one, will adore it, and new adventure types (such as my good self) will appreciate the fact that you can kill loads and loads of beings, lob in some really quite elegantly worked out spells and still save the game to come back and do it all again after tea.

Control yourself
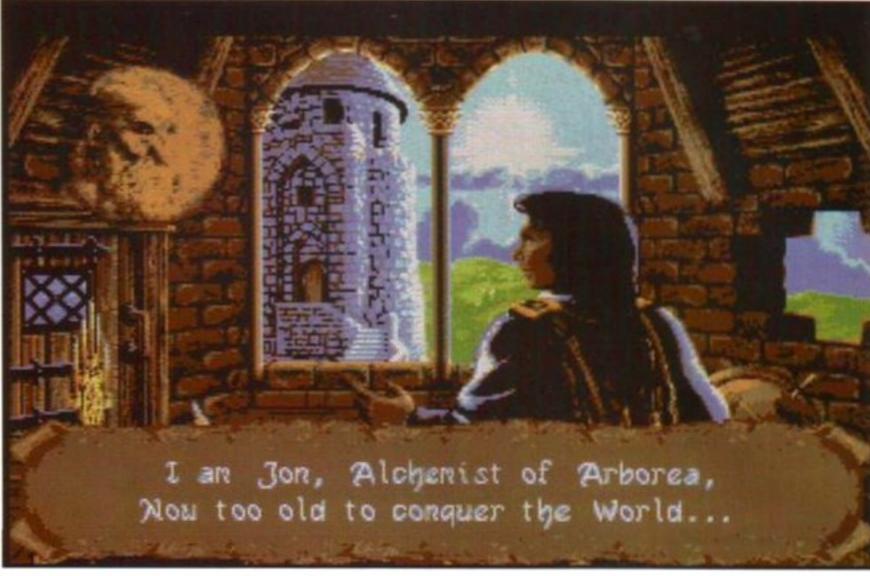
Actually one extraordinarily neat point about *Ishar 2* is that, aside from the fact that you can use teams from the earlier game, you can see the entire team blitzed around you and then nip off to the pub to collect some more suckers for a bit more fun.

OK, so you know people will want to know what the game looks like, look at the screenshots dammit! And for that realistic effect don't move your copy of *Amiga Format* at all. Just hold in front of you with really stiff arms. Now you have to imagine that the screen in the middle goes forward and from side to side, only stopping occasionally to load more scenery from disk. It's all very *EOTB* except you don't click on the screen, you move your mouse pointer to the right of the screen and up on to the direction arrows. Hell, it's a control system. In fact a great deal goes on to the right of the screen. You get to order your party, you get to hit things with your sword/bow and arrow/fist, plus you get to move.

The real interesting stuff happens at the bottom of the screen though. This is where your characters' faces appear, which by the way, you can't name, so bang goes Eric Elf and Dave Dwarf. But what we're interested in is the auto-mapping – one of the most wonderful inventions ever to grace the modern-day adventure game, and this particular auto-mapping function is easy to use, and clear enough not to put you off the general flow of the game. Nice one lads.

Also below the mugs are several icons that enable you to scrap (as in fight with) members of your own party, meet and greet

ISHAR 2 is available from Daze Marketing 071-328 2762

I am Jon, Alchemist of Arborea, Now too old to conquer the World...

You spend your youth waiting until you're 18 so you can go into pubs, and before you know it you're too old to conquer the world. You can't help but feel sorry for Jon.

Zeloran : Er... who's going first ?

Er, that's a good question. In fact it's the sort of question England batsmen often ask before facing Merv Hughes. Anyone know the answer?

Back at Jon's Island things are hotting up, despite the inclement weather. So what's going to happen? You clicks your icon and makes your choice.

other people in the game world, and lose members of your own party. All very simple, all very compact, all very reasonable.

That's not all. You can even explore your characters, maybe not in any kind of in-depth bonding sort of way, but you can dress them, feed them, check on the experience points, vitality and all of the other RPG-style facts and figures. You can swap which hand you want your weapon in, you can even swap equipment between your characters with ease. This element of the game is fluid enough and raises *Ishar 2* into the ranks of the quite pleasantly adequate RPG.

Another pleasing aspect of *Ishar 2* is the number of sound effects that litter the aural

outlands. If there's one thing you can say about the French as game makers, it's that they love the campy overkill. The babble when you walk into the tavern is gigglingly good, the sound of snoring when you rest the party is of *Terry and June* like intensity (Terry used to snore heaps) – turn it up loads and leave it running for a few hours to give some snoring partner, friend or casual acquaintance an idea of just how deeply irritating they are. The sounds of slash (well thump) and agonised cry, the screech of seagull and buzz of swamp insect pump up the atmosphere.

Nice place

Generally, *Ishar 2* serves its purpose as an RPG with workmanlike honour. There's nothing that really forces you to step back and exclaim "Mon dieu! C'est la premier joue de la epoch d'Amiga ma cherie!" But neither are there elements that would have you screaming "Mon Dieu! c'est un grand boite de froid blanchmange avec vert chien flop!"

As sequels go *Ishar 2* will keep the faithful pleased without casting any new light on their fave adventure, and it wouldn't disappoint anyone new to the genre. Nice is the word that sums it up, as in the adjective, not the exotic and exciting southern French resort. Bon joue mes amis.

Tim Smith

Ishar 2
Daze ■ £29.99

- Automapping is a wonderful and extremely welcome idea.
- Lots and lots of very long and extremely tedious walking.
- Plenty of in-game sound.
- Can't customise the characters.
- Very static.
- Still includes French.

Verdict **79%**

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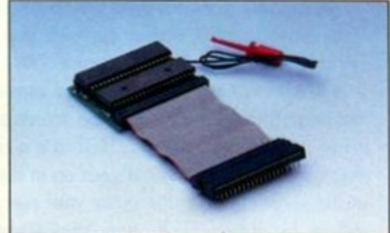
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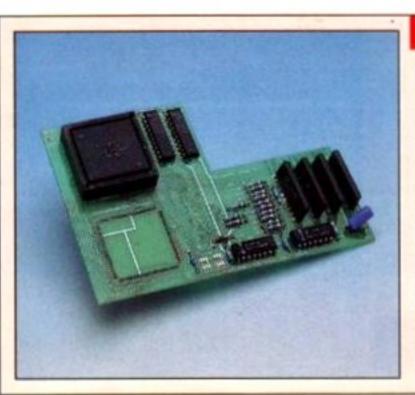
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THE BIG BANG, OR HOW TO CREATE YOUR VERY OWN WORLD

The best way to explain how a game such as *Sim Life* works is to follow its development step-by-step. Here, we take you through the initial stages of a typical game from deciding what sort of world you're going to build, to introducing the animal and plant life, and seeing how the different species adapt and survive in your carefully chosen environment.

First build your world. This is the control panel where you decide on the physical features and climate.

This includes the world with plants. I'm using 20 seeds of each of the species around the world.

A few days later, and many species have died out, while others are surviving and beginning to spread.

In the beginning there was *Sim City*, *Sim Ant* and *Sim Earth*, but now comes the ultimate challenge in the god game experience, *Sim Life*, a game in which you can create and populate an entire world...

Sim

All was quiet on planet Baguley, with only the waves gently lapping the shore and a few plants swaying silently in the breeze. Suddenly, the hand of the great god Richard did move upon the waves, and the sea was filled with several hundred hump-backed whales, feeding on the copious krill that swarm in the virtual oceans.
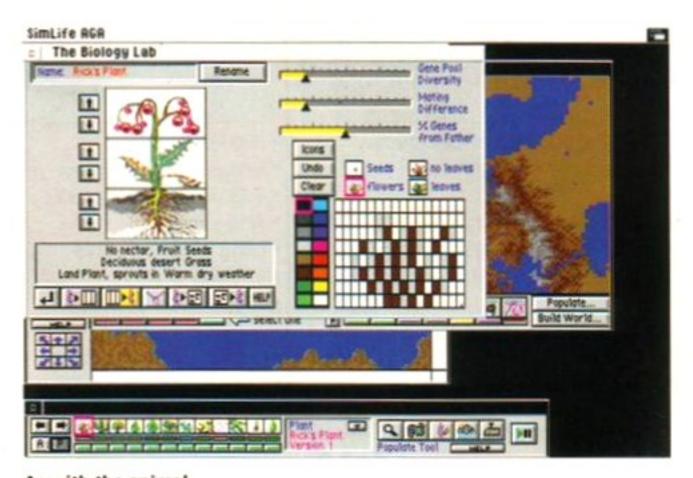
The whales were generally swimming around with no apparent destination and then suddenly, the hand of the lord did move upon the waters again, and giant squid did appear. Loud was the wailing and gnashing of the whales as the squid did eat many of their numbers. Within a few years, the whale population had fallen dramatically, and the squid were beginning to starve.

Such are the scenes you can create in *Sim Life*. This is a god game with a vengeance. All other so-called god games have really been semi-divine boss man games. I mean, the usual thing is that you're given a situation and have to influence the outcome by controlling your humble subjects. *Sim Life* takes a different approach. You are, as they say, in complete

control. Whole worlds can be destroyed, or entire species mutated beyond recognition with only a couple of clicks of the mouse button.

Let's get back to basics. *Sim Life* presents you with the opportunity to create a planet, and then to create life forms to populate it. It sounds complex, and it is. This isn't the sort of thing that you're going to get into in a few minutes. Fortunately, the accompanying manual is excellently written, and even contains a cartoon called *The Adventures Of The Genetic Family*. This includes such classic lines as 'The family that transmogrifies together eats flies together'.

God times, bad times

A tutorial file is also included with the game, and this takes you through the basics of selecting menu items to advanced topics such as building customised worlds. So once you've learnt the basics of controlling your simulated life, it's time to start running your own simulation. There are several scenarios included with the game, ranging from 'How Did The Dinosaurs Die?', where you can simulate the

As with the animal design, the plant design illustrations aren't intended to be a specific plant, just of a type.

downfall of the reptiles by evolutionary or cataclysmic method – to 'The Battle Of The Sexes', – where you simulate the various plus and minus factors of sexual and asexual reproduction. Alternatively, you can go into experimental mode, where you start from scratch by defining your own world and designing the flora and fauna which will

The animal design screen from *Sim Life*. The various illustrations of the three parts of the animal indicate a type, not a specific animal. So it's not going to be a flying elephant.

AGA ONLY

It's interesting to note that this is the first Amiga game that is available for an AGA machine only. The writers are currently working on a non-AGA version, which should be released soon.

The 256-colour Mac and PC versions of this game have been available for several months, and the fact that the Amiga AGA version has appeared so quickly indicates how much quicker and easier the advent of the AGA-machines has made converting from other platforms. This is because there is no longer any need to convert the graphics from 256 colours down to 16 or 32. As you would expect, this graphics conversion is a rather time consuming business, and can add several weeks to the time taken to produce a game.

Now we have established a plant population, let's try spreading a few animals around the place.

Again, some animal species have died out quickly, while others like the conditions and are beginning to breed.

Who's eating who? According to this, the killer penguins are eating the elephants, who are eating the plants.

The dominant plant is willow, and here we are checking the state of one elephant wandering through the forest.

Life AGA

inhabit it. There are also a variety of saved games supplied with the program, including several bizarre ones involving money trees, workers and tax collectors.

Animal magic

Life gets pretty boring if you don't have any plants or animals in your world, and creating these is where the game gets complicated. There are two ways of editing a new plant or animal; one simple, one complex, or you can interchange between the two. The simple way involves picking three attributes which determine the food source, intelligence, method of movement and environment and finally the gestation size and time. You edit the animal or plant by moving through the different cards until you find a suitable one.

With the complex method the screen is filled with sliders and buttons representing an attribute of your new species, each of which can be altered. In the initial stages, you'll probably want to experiment with existing species, so several 'zoos' of animals are included for you to load and use.

SIM LIFE is available from Mindscape, 0444 246333

All of the screens for the program are well designed, and show their Apple Mac origins in the style of the buttons and layout. It can get rather confusing when you have several windows open at once, so a degree of caution is recommended when opening new ones. As they say: 'tidy desk, tidy planet'.

Unfortunately, *Sim Life* also betrays its Mac origins through the slow screen update. Several buttons on the main screen give you menus, but once you've selected the option you want, you have to wait for the parts of the screen under the menu to redraw. This is all rather irritating, and tends to interrupt the flow of the game. Once it's redrawn you can also find yourself clicking furiously on the mouse because you're working way ahead of the screen redraws. The program then acts on all of the mouse clicks that it has been saving up! However, there are a variety of nice touches, such as the sampled 'Ooh La La' when two animals mate.

Just because it's called *Sim Life*, don't assume you are tied to dealing with real animals. You can redefine every attribute of the

plants and animals, including the icons. So you could set up a completely unreal situation with writers roaming the land, eating the fruit of word trees, and not harming anyone. Editor beasts could then feed on the writers, and immense flying Publisher beasts could devour the Editors. The possibilities are endless.

Facts of life

This is an exceptionally original game. It's different to its predecessors *Sim Earth* and *Sim Ant*, and works better for this. Although *Sim Life* is initially confusing, once you get the hang of the complex control system, it's fascinating to see how the ecosystems develop, and how the smallest change can have a powerful effect. Each game takes a long time to develop, so if you're not prepared to invest a significant amount of time in playing a game, this is one to avoid! But if you enjoy challenging, complex and thought-provoking games, this is one of the best I've come across for some time. It's just a pity that some of the glitches in the program detract from this.

Richard Baguley AF

HERE'S HOW TO TAKE CONTROL OF YOUR OWN DESTINY

Edit window: you can see the individual animals as they roam around the globe. You can also select a view of the entire world, in which all the animals are represented by small dots.

Dashboard: from here, you can access any of the many windows for getting all sorts of information about your brave new world.

Variables: this gives you the statistics for one particular animal. Statistics in green are OK, in yellow are iffy and in red means the animal is about to die.

Control panel: various options to change both your world and the animals therein are available here.

Dead animal

Animal

Sim Life
Mindscape ■ £34.99

● Forget all the other so-called god games, this is the real thing!

● Some of the icons are rather small and difficult to distinguish in the menus.

● Screen updating and response time to mouse clicks is irritatingly slow.

● Games take several hours to develop, which is not necessarily a bad thing.

● Who ate all my hump-backed whales?

86%

As Commodore moves the Amiga into yet another killer role, this time as the finest 32-bit console ever to grace the planet, we at *Amiga Format* want to grace five homes with these new wonder machines!

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Dear Mr *Amiga Format*,
Bah, piffle, ... consoles...humbug! We are Amiga users not console users! If I had wanted to be involved in a standard of computer useage that included consoles, I would have pur-chased one of those Atari VCS 8000 things.
Yours, Colonel Buster Bluster (Rtd)

Dear Colonel Buster Bluster (Rtd),
I suppose that means you won't want to win an Amiga CD^{32} for FREE, for GRATIS and for NOTHING, other than the price of a stamp and the effort of answering five simple questions?
Yours in the summer sun,
Mr *A Format*

Dear Mr *Amiga Format*,
This FREE Amiga CD^{32} I might win, ahem... it is an Amiga isn't it, not just a console?
Yours interestedly,
Colonel B Bluster

Dear Buster,
Yes, it's an Amiga and yes it's a console but... there will be loads and loads of add-ons for it (for details turn to page 12). There will be loads of games – so we're told – which means fun and relaxation. And you could be the first Rtd Col on your avenue to own one.
Yours in a generous sunny mood,
A Format

Dear A,
A-double-hem, what are these questions then old thing?
Yours, in a tactical reappraisal scenario,
Col BB

Dear BB (Rtd),
As Sal Paradise might say, below man! Below! Oh, and reading our report on Amiga CD^{32} starting on page 12 would be a distinct advan-tage to you.
Yours in foolish generosity,
AF

Dear *AF*,
What about rules? We must have rules!!
Yours,
Col B-the-B

Dear BB Boy
The normal rules apply:
i) No employees of Future Publishing or Commodore can enter.
ii) Entries will be welcomed on postcards, the backs of sealed envelopes, as faxes or as messages posted on our E-mail addresses. If we have to open envelopes, forget it bud.
iii) Entries should arrive at *Amiga Format*, ACD for Me! Competition, 30 Monmouth Street, Bath, Avon BA1 2BW no later than Friday September 1. Now get on with it!
iv) Only one entry per person.

TEMPLE OF TRAVIA IN THORWAL

ARBOSH RHENAYA VARANO TAMION TALIMEE HJALDIS

The animated intro sets the scene for the game, and gives you some useful information on its background and aim.

Blade Of Destiny

Derring-do is considered passé these days. However, AF adventurers are hard to hold back as we found out when they explored the latest US Gold RPG.

Dungeons & Dragons just doesn't cut the ice if you're a German role player. Apparently, everyone is playing Das Schwarge Auge, which roughly translates as 'The Black Eye' (that's black as in evil, not black as in after a punch-up). The game is built around the world of Arkania, where Dragons are disgruntled, Elves are elevated and Orcs are 'orrible. Actually, it's more medieval than fantasy, although there wasn't as much magic in medieval times as there is in Blade of Destiny.

The story behind the game takes place in the peaceful land of Arkania which is under threat from a band of Orcs. You control a band of adventurers whose mission is to recover the nine parts of a map showing the location of the lost blade of destiny, which you should then proceed to bury in the Orc chief's head. Unfortunately, the previous owner of the blade got rather tied up with a bunch of Orcs who chopped off bits of his anatomy and confiscated his sword.

You've not only got to find bits of the map, but you build up a group of adventurers who aren't afraid to travel into the snowy wastes of Orcland and fight with all the unpleasant beasties. So, fearlessly, you travel through the various realms of Arkania, righting wrongs, drinking beer, and saving helpless dragons from terrifying maidens...
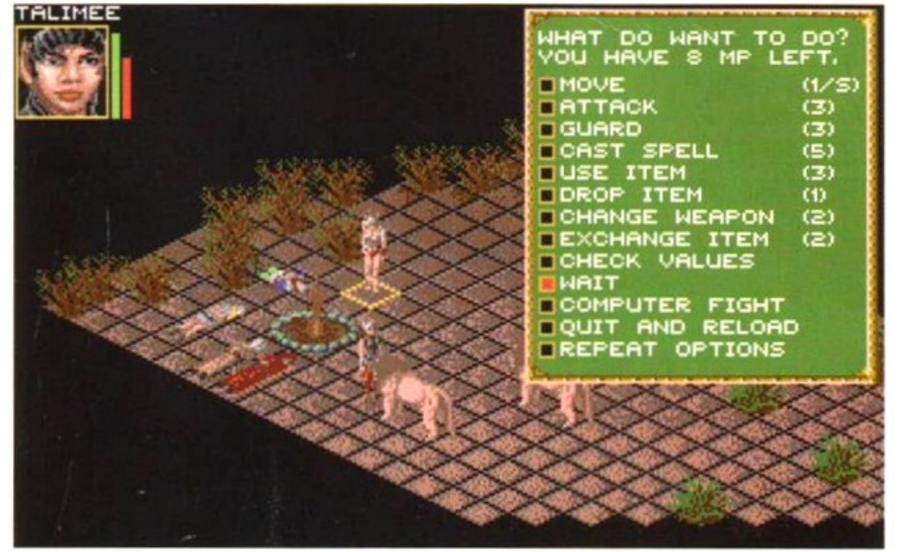
It's the way I tell 'em

All right, so there's nothing stunningly original about the concept or the background in this game. It's not a storyline that's likely to win any prizes for originality, but because it can be approached from many ways, and the solutions also vary, it keeps you interested every time you start a new game. The storyline also provides a good background, and the places you move through have a 'real' feeling to them.

Your first stop in this game should be the manual, because you're not going to be able to get into it within five minutes. The manual gives you all the information that you're likely to need on the towns, cities, gods and countries of the realms of Arkania. It also explains the complex character creation system.

To create a group is a rather involved process – you have a series of the usual characteristics such as strength, wisdom, intuition and dexterity – as well as attributes such as superstition (fear of magic), avarice (greed) and necrophobia (fear of the dead).
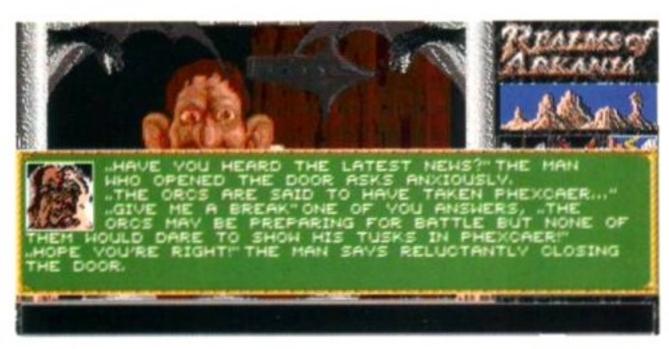
Each will have a different effect – a character with high necrophobia is more likely to run away if confronted with an army of 'dead' Orcs, than an army of living Orcs. There's no such thing as a free lunch with characters, so if you set a character's strength attribute high, he, she or it, is likely to turn out to be somewhat lacking in the brains department.

BLADE OF DESTINY **is available from US Gold on 021-625 3366**

TALIMEE

WHAT DO WANT TO DO?
YOU HAVE 8 MP LEFT.
☐ MOVE   (1/S)
☐ ATTACK   (3)
☐ GUARD   (3)
☐ CAST SPELL   (5)
☐ USE ITEM   (3)
☐ DROP ITEM   (1)
☐ CHANGE WEAPON (2)
☐ EXCHANGE ITEM (2)
☐ CHECK VALUES
☐ WAIT
☐ COMPUTER FIGHT
☐ QUIT AND RELOAD
☐ REPEAT OPTIONS

One of the best ways of getting information is to wander around towns knocking on peoples doors. However, not all the locals are pleased to see you...

If you're trekking through the wilds of Arkania, make sure to put some guards on post while your adventurers are having a quick kip, as there are a number of wild animals wandering around.

..HELLO THERE! I'M SURE I DON'T KNOW YOU SO, GET OUT!"

Clicking on one of the small red dots representing towns on the map gives you some background information on what sort of reception you are likely to receive when you stagger into town.

Character creation is performed in a separate program, which also sets up a disk for saving games if you're running off floppy disk. To set up characters you can either start from scratch and roll a set of virtual dice for the various attributes, or you can pick an Archetype – such as Warrior, Dwarf, Rouge or Druid. From this basis, you increase certain attributes, although this will also lead to other ones being reduced. It's a good idea to get a range of different characters, as you will need many skills to get on in the game. Once you've created your group, you save them to disk and go into the main part of the game.

If you wander around knocking on strangers doors, most of them will tell you where to get off. However, some will furnish you with useful information...
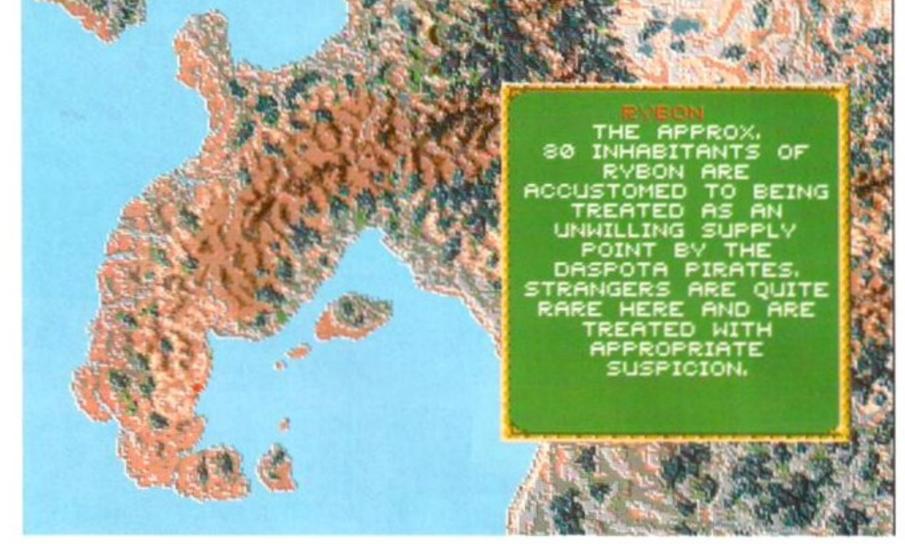
A night out on the town

You and your happy band start out in Ragnar, one of the more cosmopolitan cities in the realm of Arkania. Here, you can move around the city familiarising yourself with the controls, and checking out what's going on. A good place to start is a tavern – they're full of locals gossiping. There's also a dungeon in which you can practice the combat system.

Once you've had a look around town and equipped your team, it's time to go out into the big wide world. But first you need to find one of the signposts on the edge of town. When you walk into a signpost, the map screen appears and you decide where to send your band and keep track of their progress. If they come across anything, or are attacked, you are moved on to the relevant screen. Even if your adventurers are tough, they will need to sleep sometime, but if you set up camp for the night, put some guards on watch – you never know what sort of nasties are around.

In to battle

Combat takes a completely different approach from that used by most other RPG's. Instead of using the normal player point of view, you are presented with a pseudo 3D view not dissimilar to that of *Battlechess*.

Each of the players and nasties take turns to carry out their actions, which are controlled by a system of points. For instance, if you've got five points, you can either move five squares or attack the enemy, but not both at the same time. Your actions can be move, attack, cast spell, switch weapon or wait. If you've got any archers in your party, it is best to keep out of the fray and shoot baddies from a distance, as they're less likely to get chopped up here. The players have their own little animation and accompanying sounds, and these work well to give a realistic feel to the combat section.

If the fighting all gets a bit too much, you can run away by moving off the edge of the board, but if you're blocked in you have to fight it out. This means that fights last longer and are more involved, requiring real thought instead of the usual button pressing frenzy.

If you survive a fight, each of your players is given a number of experience points, based on how nasty the opposition was and if you encountered any new monsters. Collecting enough of these means your character can advance a level, where they can improve their characteristics. Magicians can also use this to learn new and better spells.
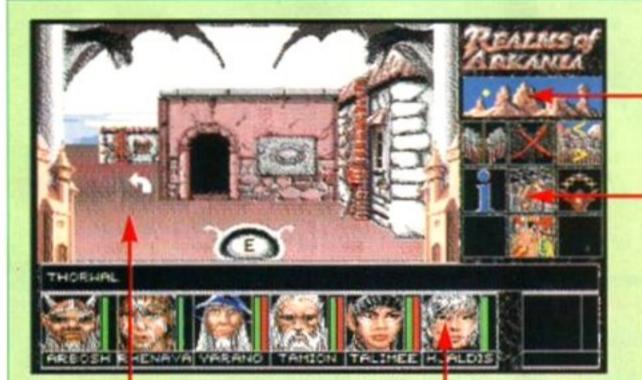
As you move through the various areas, you pick up rumours and carry out a series of tasks. This will eventually lead to obtaining all of the bits of the map, which will lead you to the last resting place of the blade of destiny. To get anywhere near the blade, you will need to have some pretty tough adventurers, so don't expect to complete this game in a few hours – it will be more like a few weeks.

It does run on a standard 1Mb A500, but you have to lose either the complex bitmapped graphics or the in-game music if you're running on a machine with only 512K Chip RAM. Playing on a floppy drive only system is possible, but be prepared to spend a lot of time waiting for the program to load data, even if you have a lot of memory. It does take advantage of any extra drives, but there's still a lot of disk swapping involved. This is a brilliant excuse for buying a hard disk – it's almost unplayable on a floppy drive only system.

The whole approach of the game is based more on games such as *Dungeons and Dragons* than other RPGs like *Eye of the Beholder*. This works in its favour, because you're working within a better designed and more established system. For instance, there's more variety of magic in *Blade of Destiny* and it is well thought out. It's certainly a game that will take a long time to solve, and it's challenging enough to make it worth coming back to. This game is the first in a trilogy, and the future for the realms of Arkadia looks extremely bright...

Richard Baguley ☻

A BEGINNER'S GUIDE TO CONTROLLING YOUR BAND OF HAPPY WANDERERS

Main view: this is the view of the town or dungeon as you move through it.

Characters: each of the members of your team has a place here, and a NPC (non-player character) fits into the far right side if they join your party.

Time: This shows what time of day (or night) it is.

Control icons: here, you can carry out various operations such as splitting your party up, getting information on the town you are in, consulting the map of the town and casting spells to heal injured members of the party.

Blade of Destiny
US Gold ■ £39.99

● A lot more depth than many other RPG games

● Good Sound, although the in-game songs can get a little irritating.

● It'll definitely take more than a few hours to play through

● A variety of challenges and a well executed combat system

● Hack and slash with an attitiude!

91%

Steve Bradley knows plenty about football. Luckily he also knows a decent budget game when he sees one. Especially the footy ones.

Cheap 'n'

Project-X
Team 17 ■ £12.99 ■ Reviewed *AF*35 75%

Reggie's spaceship was the business and boy did he know it. Everyday, he'd swoop over Halifax town centre, showing-off before heading for other worlds.

Fasten your seatbelt, this one is going to be a rough ride. What a fine intro. This is a shoot-em-up's shoot-em-up, a blast from the past (1992 actually) you are a rider at the gates of space, flying your craft like the wind. Bad things are happening on the planet Ryxx, with evil creatures wanting to do naughty deeds. And guess what, you are the only one who can stop them.

The action comes thick and fast. There are loads of power-ups to boost your progress and these include extra speed, missiles, plasma, lasers and stealth. The latter makes you virtually invincible, though if you add too many weapons your ship can become sluggish so it's important to keep collecting the speed.

This version has been tweaked slightly and has been reduced from four disks to three. Plus there's now a Rookie mode that enables novices to get to later levels. Make no mistake, *Project-X* is a great shoot-em-up and at 13 sovs, a great buy.

GOLD 90%

"This'll show the folk back in Halifax who's boss" muttered Reggie under his breath as he pounded the alien forces with a barrage of lazers and missiles.

CONTACT NUMBERS
Kixx	021-625 3311	Empire	081-343 7337
Buzz	0709 372290	Team17	0924 291867
Hit Squad	061-832 6633		
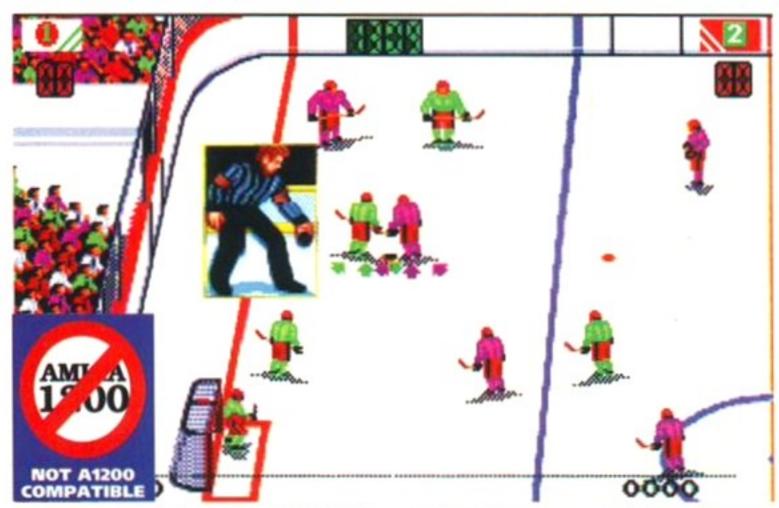
Face-Off
Buzz ■ £9.99 ■ Reviewed *AF*29 83%

NOT A1200 COMPATIBLE
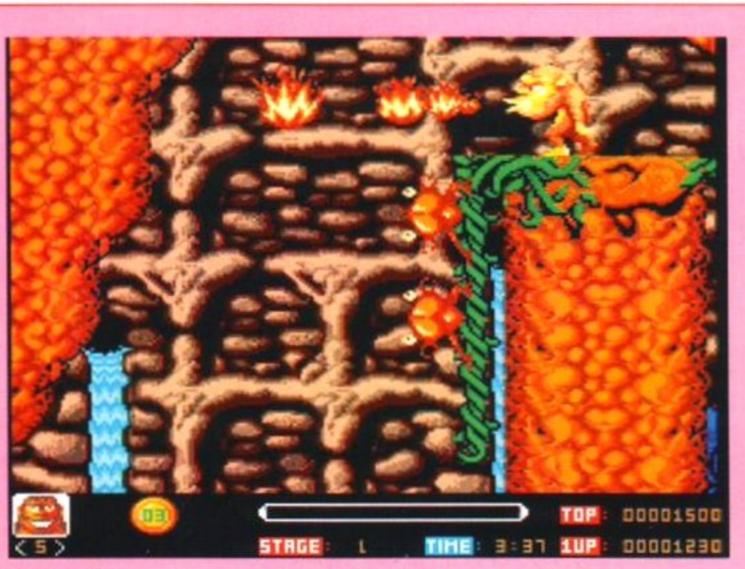
"Hi Wayne, how's the wife and kids? Listen up, why not come on over later and have a bite to eat – if you've got any teeth left by the time I'm done with you, heh, heh, heh."

Probably a better title than Puck-Off, *Face-Off* thankfully does not refer to taking someone's face off. More of an ice hockey game than a netball sim, *Face-Off* is a rough 'n' tumble skate-em-up where the action comes at a fair old pace. Not for those faint of heart, ice hockey is a game played at a frantic pace.

There are plenty of options here with both arcade and management sections. You can train players and even take them on a night out to a concert or nightclub for a spot of 'refuelling' – important for morale. The players all have individual attributes – some are better than others at passing and shooting while some have more strength. However there is the option to train them up and improve in areas where some may be lacking.

The screen has a side-on view which works quite well, but I find the gameplay a bit slow. You don't get the feeling of frenzied action that is ice hockey. *Face-Off* is by no means a bad game, it just could have been a lot better and the violence and the punch-ups are a bit too tame. At the end of the day, it's a competent, if uninspiring game of three periods.

Verdict 70%
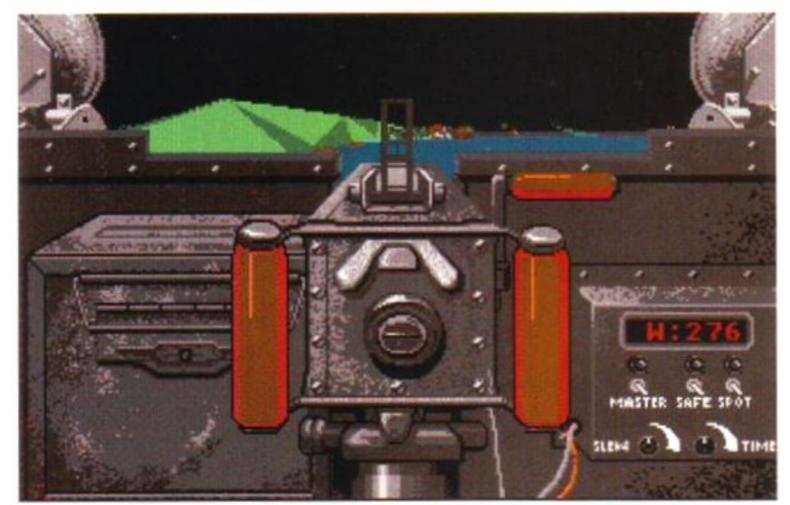
"But don't play with me 'cos you're playing with fire," sang Toki to a couple of local crabs. However they didn't listen and Toki killed them shortly afterwards.

Cheerful

Gunboat

Hit Squad ■ £9.99 ■ Reviewed *AF*25 72%

"Ooh, wasn't that a Mallard?" squealed Gunner Toby Robinson. "Robinson," shouted the Sergeant. "You will spend two days in solitary with *The Observer Book of Birds*."

I'm not paranoid, but evil is all around isn't it? On every stream, every river, in fact every inland waterway lurks untold terrors. River Ouse – evil water fowl, Leeds-Liverpool Canal – mad fish, Norfolk Broads – killer ducks. Enter *Gunboat*. The PBR (Patrol Boat, River) is an eight ton power-packed dynamo of a boat. But unfortunately, you don't get to cruise the Norfolk Broads. Altogether more dangerous exploits are the order of the day – Columbia, Panama and Vietnam.

After reporting for duty, you can choose to practice three areas of PBR combat skills: piloting the boat, gun operation, or firing grenades. Essentially, you must steer the boat down rivers blowing away the enemy while ensuring you don't kill civilians – using the map to help guide you. On successful completion of a mission, you earn medals and get promoted to a higher rank.

The graphics and sound aren't the most sophisticated you will ever see in an Amiga game, but on the whole *Gunboat* works quite well. It's easy to get into, yet difficult to master and after all, how many other PBR sims are there? Not many thankfully.

Verdict 75%

Toki

Hit Squad ■ £9.99 ■ Reviewed *AF*24 79%

Demons, swimming goggles, witchcraft and American football helmets – oh, and a large monkey. Ingredients for a platformer some might suggest, and in many respects they'd be right. In fact I'd find it difficult to argue against them. Evil Bashtar has turned warrior Toki into an ape and kidnapped his chick Miho. Not best pleased with this turn of events, Toki sets off for a few levels of platform fun to rescue the said chick – too much monkey business. Battle your way through mountains, ice, fire, a forest and a castle. Toki has an unusual method of stamping out nasties – he gobs on them – oh, and he can also jump on them.

Now some might find the idea of a spitting primate unpleasant, but one must remember that this is a monkey on a mission. How would you feel if you were re-Charles Darwined and your lass was imprisoned? No, I wouldn't be too pleased either. Just a minute, I'm playing the game so I'm Toki. That means this is happening to me and I feel dreadful about the whole thing.

In-between baddie bashing, there are gold coins to collect – get 30 and you gain an extra life, collect a wristwatch and you get more time. To complement the action there is a soundtrack that you will either love or find incredibly irritating – me, I like it. With six levels to complete and evil by the barrowload to overcome, *Toki* will amuse you until the cows come home.
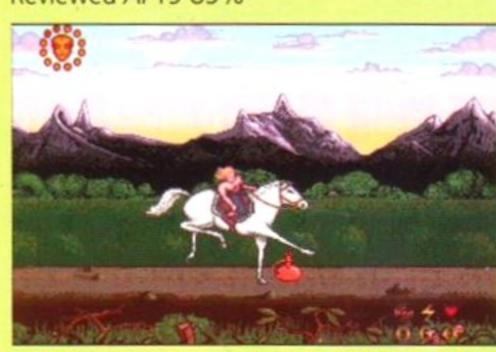
Verdict 86%

The Animation Classics Pack

Empire ■ £44.99

Wrath of the Demon

Reviewed *AF*19 85%

Neigh, neigh and thrice neigh thought the horse, sick to the back teeth of incurring the demon's wrath.

Well it all looks very pretty. And the intro is absolutely splendid – great animation and nice panning. Summoned by the king (he's in charge he is) you have to defend the realm, rescue the princess and then get shot of the Demon – and all before the great banquet in the big hall.
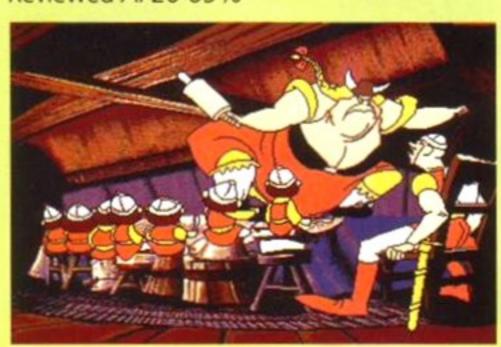
The mission begins with a cross country gallop on a trusty steed where you jump, punch and pick up objects. It's not wildly exciting. From then on you beat and slay things but the gameplay leaves more than a little to be desired.

Dragon's Lair II

Reviewed *AF*20 65%

As the large woman approached, Dirk knew that she wasn't about to ask for help with rolling the pastry.

Dirk the Daring – for it is he, must do daring deeds dedicated to Daphne. Why? Because an evil wizard has 'borrowed' her. From here on, a series of animated adventures unfold in which you play a surprisingly minor role considering you're playing the game.

It's a case of sit back, watch the action and move your joystick at the right time. This, as you can imagine becomes rather tedious after a while. The animation is excellent and the samples superb but it's ultimately a frustrating exercise.

Space Ace

Reviewed *AF*8 62%

"Shucks and diggity-dog doggonnit" said Space with an air of resignation after being zapped yet again.

Earth is under attack. Who's responsible? Well apart from Julian from the Famous Five, it's Commander Borf using his nasty weapon, the Infanto Ray which turns adults into children.

And to cap it all, the bounder Dorf has kidnapped your female companion – the lovely Kimberley. You are Ace, and it's your job to clean this mess up. First off, there are Borf's laser blasts to be dodged, followed by various encounters with all manner of strange robots and aliens.
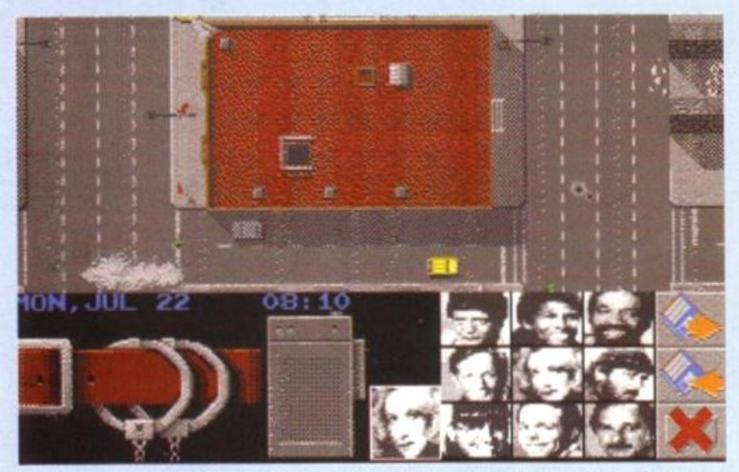
The animated sequences are visually of a high standard (positively Disneyesque in fact) but unfortunately, as in *Dragon's Lair II* you control the reactions rather than the actions of the character making your level of participation limited. With little lasting interest *Space Ace* is pretty, but pretty pointless.

Verdict 44%

Hill Street Blues
Buzz ■ £9.99 ■ Reviewed *AF23* 82%

"Gritty realism and a joy to behold," MJ, St Helens. "Surely the most realistic cop show on the telly," BB, Orpington. Some statements I have recently made up.

As Captain of the Hill Street Police Precinct your aim is to solve crimes and prevent a build-up of unsolved cases. Your officers patrol the streets awaiting orders. The faces (such as Renko and Belker) may be familiar to a few of you in this licence of the popular programme of the same name.
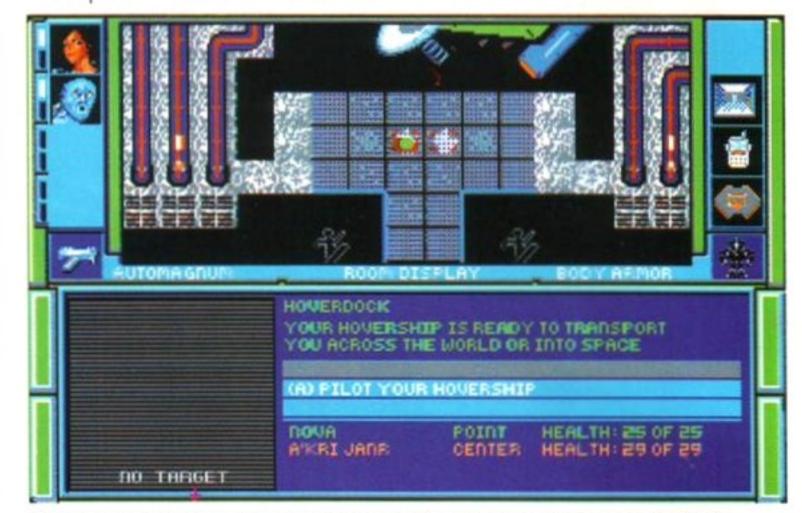
It's not the easiest game to get into because of the amount of controls but once you're up and running it becomes quite simple. A point 'n' click affair, you solve crimes, your popularity and efficiency increases and promotion beckons. Fail and you're given the old heave-ho.

An enjoyable cops and robbers romp, *Hill Street Blues* will appeal to fans of *The Bill*. In fact, Inspector Morse plays this on his A1200 when he's off-duty.

Verdict 80%

Hard Nova
Hit Squad ■ £9.99 ■ Reviewed *AF28* 42%

"Senator Carlton, you are a man of great Calibra. When you Ventura to the final Frontera, your Cavalier attitude will make you the Victor. Viva Senator Carlton." Help.

Tough Vauxhalls have never figured highly as subjects for computer games. *Hard Nova* is no different. There seems to be no reference whatsoever to motor vehicles. In fact it's more of a role-playing adventure in space. You're a mercenary with a ship that needs manning. Smuggling arms and ammunition is the order of the day, but the path to riches is not straight and true.
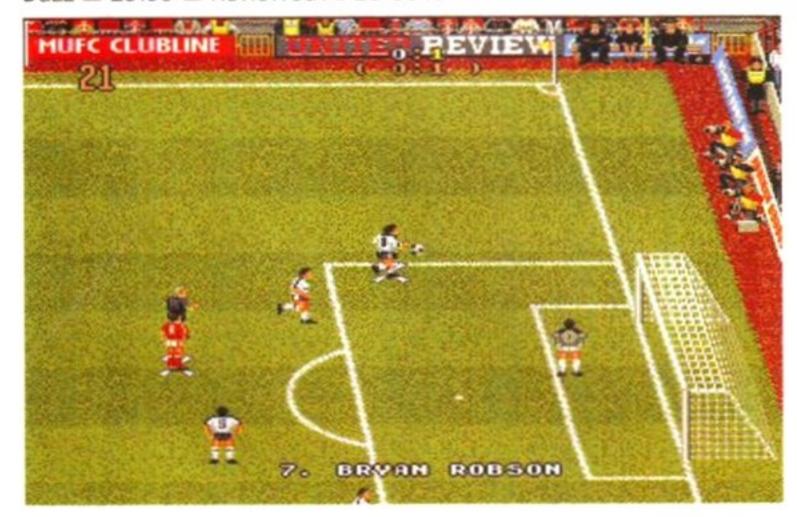
There are three areas to the game – space, land travel and footwork, and you must utilise them all to make big bucks. Unfortunately the action does not fly thick and fast and the graphics are spectacularly unspectacular. And the game takes 12 years to load by the time you've done all the daft disk formatting. You point 'n' click and then play something else.

Verdict 44%

Manchester United Europe
Buzz ■ £9.99 ■ Reviewed *AF25* 80%

Chockie, Useless, Gladys, Denise, Tampax, Adolph, Sunbed, The Boy Born with a Silver Football in his Mouth, Fergie, Pally and erm, Incy. Nicknames aren't what they were.

Has anyone noticed the current dearth of netball sims for the Amiga market? Here's a budget re-release that could have been tweaked to look a bit more like netball. Missed opportunities aside, this coincides nicely with Manchester United's recent success. A side view footer game, it looks rather ponderous in these enlightened and *Sensible* times. The sprites are large and clumsy and the play slow – which is not necessarily a bad thing.

However, the quality of the football games currently on the market makes this a bit of a non-starter – though it may well be a football collector's item in years to come, no doubt because of the words 'Manchester' and 'United' on the box.

Verdict 60%

Zak McKracken and the Alien Mindbenders
Kixx XL ■ £9.99 ■ (Not previously reviewed)

"And kid, I'm a journalist, a real journalist so don't go writing no stupid dumb-assed caption below my game". Hey Zak, look out for that french bread stick.

Roving reporter Zak's task is to save the Earth from aliens who are threatening to reduce mankind to gibbering morons. And they've got a devious machine that lowers the IQ level of us humans (assuming that most of you are – with apologies to canine readers). With a huge gaming area, there are loads of options open to you in this mouse-clicking extravaganza. Though there are many off-the-wall parts to the game, logical thinking is the best route to success. One handy option is the ability to switch places with your companions – this allows you to get around quicker.

Zak McKracken is easy to get into and play and likely to appeal to those with a thirst for adventure and game for a laugh. With good graphic humour, it's a comedy thriller that will keep you coming back for more.

Verdict 78%

Chart busters ▼▲

Flashback
Reviewed *AF45, FG93%*
US Gold ■ 021-625 3388

AMIGA GOLD FORMAT

Outselling everything else at the top of this month's games chart is this incredible cyberpunk-style adventure from US Gold/Delphine. Here are some codes for the first few levels of the English version, and you will find the solution for level one on page 98.

LEVEL	EASY	NORMAL	EXPERT
1	WIND	FIRE	MINE
2	SPIN	BURN	YOUR
3	KAVA	EGGS	LINE
4	HIRO	GURT	NEST

A-Train
Reviewed *AF45, 84%*
Ocean ■ 061-832 6633

If you've followed our handy tips from last month's issue, you should be building advanced railroads by now. If you're not, maybe you need a cheat. Well, you appear to be in luck, because here's a brilliant one from Bertram Entwistle of Hemel Hempstead.

In the main game, type in CHEATERCHEATERWIMP (with no spaces) to be awarded a massive amount of money. How much? Ooh, about 50p, I think (actually, it's more like $50,000,000 or so).

War in the Gulf
Reviewed *AF49, 78%*
Empire ■ 081-343 7337

On the filing screen, pop up a file and type in 'Let me cheat!' (including capital and exclamation mark). Now, click on the Reset button, and go into the game. You can now choose to go to any of the squares on the map.

GameB

This month we've got GamesBusters big style – six pages of tips, cheats, tactics, you name it, they're here – all from the very sporting **Andy Nuttall** (and a few people who helped him out).

WIN A GAME FROM PSYGNOSIS!

The people behind such great games as *Lemmings* and *Shadow of the Beast* – Psygnosis – are now sponsoring GameBusters. This means that if you send in a tip you have the chance of winning any Psygnosis game. And if you don't want a game you can choose an *AF* mail order voucher instead. So send in those tips, maps and cheats and state which game you would like.

CREATURES
Reviewed *AF45, 63%*
Thalamus ■ 0494 474713
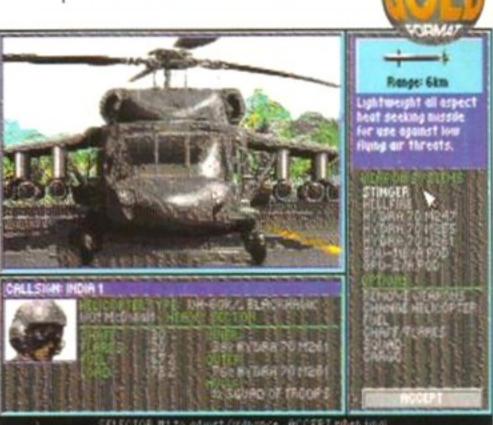
Pause the game, and type in A FINE KETTLE OF FISH (including spaces). Then use F1 to F9 to jump to a level, F10 to skip levels, and C to turn the cheat mode off again.
Gideon Simpkins
Haringey

The problem is getting past the chainsaw madblob. Use the cheat mode above, and it's easy.

Gunship 2000

Reviewed *AF49, 94%*
Microprose ■ 0666 504326

AMIGA GOLD FORMAT

Sometimes the computer gives you a squad when it should give you a cargo. Always check your load!

Although this is one of the most easy-to-get-into flight sims around, flying a gunship can sometimes be tricky. Here are some words of advice from James Hawkins of MicroProse…

■ When you begin playing the game, fly in Europe instead of the Persian Gulf. The missions in Europe are generally a bit easier due to the terrain of the area. Always try to fly along the rivers as you will then be below ground level and the enemy will find it very difficult to shoot you down. In some parts of Europe there are steep cliffs either side of the river, flying between these provides the player with almost perfect cover.

■ If you get a mission where one of the targets is to destroy a train, always aim for the engine, destroying this will immobilise the rest of the train. You can also fly through the tunnels which provide the player with perfect cover from enemy radar and missiles.

■ You should always set the co-pilot to activate the chaff and flares. The co-pilot is fairly good at using both the jammers and the chaff/flares, and as your rank

increases he will improve. When you are attacking a target, the last thing you want to be doing is trying to jam enemy missiles.
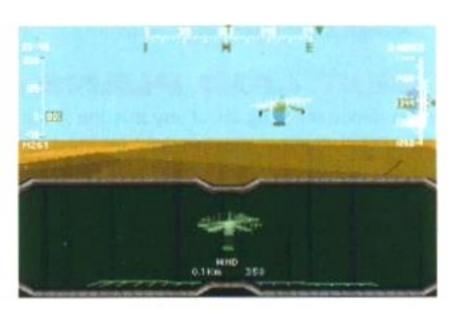
■ Use the hills as much as possible to sneak up on targets, the zoomed in map will show you the terrain in detail. When you have sneaked up on a target using the hills, wait for them to fire and then attack. When attacking targets from this kind of cover there are two good methods for attacking the target.

1) The pop-up attack

Using this method you put the chopper into a hover just before the hill, and then use the shift plus key to increase your height very quickly. Lock on to the target which you can now see over the hill and wait until it fires. When the target fires at you, use shift minus to quickly decrease your altitude and effectively hide behind the hill. When the enemy missile hits the other side of the hill pop up again, lock on to the target and fire. Your missile should then destroy the target before it gets a chance to fire again.

2) Sneaking around the sides of hills

Using this method, the target should be very close to the hill that you are using. You fly around the side of the hill and destroy the target using the cannon, before it gets a chance to fire.

usters

Mast mounted sights (F2) make it easy to spy over hills, but watch out for enemy helicopters.

3) Combining the two techniques

You can also combine the two methods very effectively. Hover behind a hill and then pop up. Let the target fire at you and then hide behind the hill again. Now fly around the hill. The target will still be expecting you to come over the hill and will have to turn towards you again before it can fire.

■ Whenever the Longbow Apache is available, use it. It is the only chopper that gives you the long range hellfire weapon systems which are invaluable in the battle field.

■ If the Longbow Apache is not available, the Comanche Gunship is a good alternative. If you fly a Comanche Gunship, give your wing men Apaches, then when you fly in the mission the enemy will lock on to your wing men and not on to you. This gives you the chance to get close to just about any target and destroy it with cannon fire.

■ If you have to transport, rescue or pick up anything always double check that you have a Blackhawk in your squadron. There's nothing more frustrating than arriving in the battle zone and finding out you haven't got the choppers you need to complete the mission.

■ When you have to transport or pick something up, always destroy all the hostile targets in the immediate area to create a free zone.

■ On search and destroy missions, fly around the suspected target area in a triangle. Use the normal map to set this flight path. Once the objective has been sighted its position on the map is updated.

■ If you send your wing men out to attempt a reconnaissance mission, make sure you put their weapons on hold when they are near the target, otherwise they will destroy the target when it fires at them. When you're on a reconnaisance mission it is best to use choppers with a mast, since they can observe the target from further away. As soon as you get confirmation that the objective has been achieved, set the wing men weapons to free so that they can destroy hostile targets again.

■ Always promote your section leaders to the highest ranks. The section leaders usually get fired at most because they fly in front most of the time. Remember as their rank increases their ability improves. They will become bet-

ter at using the Jammers and Chaff/Flares and won't get hit so much when they reach the higher ranks.

■ If you run out of chaff or flares it is best to use the outside views to try and dodge the incoming missiles.

WEAPONS

■ Some targets need two hits from hellfire missiles, the most common target that takes two hits is enemy infantry. It is best to destroy these with cannons if possible. Rockets can also destroy infantry units with one hit.

■ Practice using the rockets a lot as you can carry lots of them. Once you have mastered the aiming process, they are one of the most useful weapons because you do not have to stay locked on to the target when you fire. They are also very useful for attacking multiple targets. If the targets you attack have good armour, make sure you use the salvo options to fire more rockets at them.

■ When you are approaching more than one target always destroy the target with the longest range first. The SAMs quite often have a range of 14KM they are also quick at reloading and firing again. It is usually better to destroy a target instead of running away once it has tracked you.

MISCELLANEOUS

■ If there isn't a FARP point in the mission and you are short of missiles and fuel, landing at the base will also replenish your supplies.

■ If your HUD is damaged do not panic, make sure you check your altimeter straight away and get the chopper into level flight. Then put the nose down until you reach a reasonable speed (keep an eye on the altimeter). Now fly using the cockpit dials.

■ If you are unsure whether a target is friendly or not, just pause the game and it will tell you. If you destroy friendly targets you will lose points from your overall mission score.

■ Always try to complete both objectives in 30 game minutes or less. A clock is shown in the top left corner of the HUD. If you take longer than this, points are deducted from your final score.

Gunship 2000 tips will be continued next month

The Inverse Tactical View (F8) is handy for identifying targets, but don't get carried away.

Reach For The Skies

Reviewed AF48, 90%
Virgin Games ■ 081-960 2255
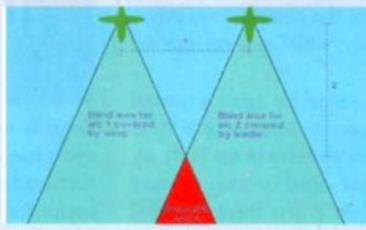
Keep your eyes above the instruments, not on them. Oh, and have a small chocolate bar in the mid-morning. That'll get 'em.

Rod Hyde of Rowan Software zooms in with some tips to help you lead a long and successful career in this exciting flight simulation.

■ Keep the sun behind you. If you must fly away from the sun, 'tack' away at 45 degrees from the direct course.

■ Keep your eyes out of the cockpit rather than on the instruments.

■ Look for relative movement. At the edge of visibility where a stationary aircraft would be invisible, the relative motion of an aircraft against the backdrop will give it away.

■ Battle of Britain aircraft did not fly as high as modern fighters. This means that a pilot can also look for aircraft shadow over the ground and sea.

■ Watch out for the messages from your ground controllers and fellow aviators. These should help you make your search more profitable.

■ Watch your six (behind you), but don't rely on the rear view mirror. Use the outside view.

■ Once you have spotted the enemy, you should attempt to keep out of his sight. If you haven't already done so, move up sun, gain more height, and use any cover provided by clouds or high ground.

■ After the attack, get away quickly using all speed. Only go for the deck as a last resort. At low altitude, small arms fire from the ground can be very dangerous.

■ A pilot is at his most vulnerable when he is attacking another aircraft. He needs to concentrate on the attack and does not have much time to look around. So, get away as soon as possible, because there could be a bandit on your tail.

■ You should attack suddenly and aggressively. Be sure of the shot before you open fire. Once the shells start to fly, your position won't stay secret for very long.

■ In a tail chase where you have an enemy aircraft in front and you are not gaining on him, give him a burst of gun fire. This may scare him into weaving about, which could be enough to slow him down and let you catch up.

■ Once you have made visual contact, don't let the bandit out of your sight. There are two basic problems:
1) When you start a manoeuvre, the bandit will respond. If you are not looking at him, he will not be where you expect him to be when you finish the manoeuvre.
2) The bandit can turn away if your concentration lapses. This could make him almost invisible.

■ The best defensive tactic is a hard, fast offensive movement. At the very least, this will unsettle the attacker.

■ Don't run from the aggressor, turn towards him. This may make the attacker overshoot.

■ In summary: spot the enemy first. Get into a strong attacking position. Attack swiftly, suddenly and aggressively. Then get out as quickly as possible.

■ As an exercise, try to make a successful interception, and attack without letting the computer bandit know that you're there.

■ Fly in pairs. Fly close enough to provide mutual support, but not so close that formation flying requires too much attention.

Fly in pairs: adjust 1 so that 2 is greater than the max firing range of the enemy.

Syndicate
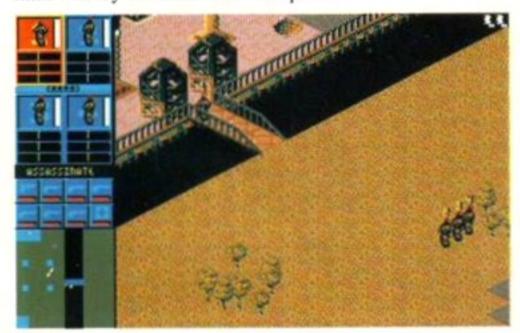
It's time for The **Alex Trower's** Guide To Syndication (sub-headed Mini-Guns and Mayhem on less than $5 a day). Or in other words 'one of *Syndicate*'s authors gives you a hand'.

Reviewed *AF49*, FG91%
Electronic Arts ■ 0753 549442

GETTING STARTED

■ The first step is to get used to the controls and to how the man will react in different situations. Be aware of where you are clicking on the screen as your man will try to reach the exact point.

Clicking on the scanner (bottom left) to move your agents is sometimes quicker than using the main screen.

■ As you are viewing the cityscape from an airship it is hard for you to direct your man to an area that you cannot see (behind a building, for example). Sometimes it is easier to click the location on the scanner.

■ For the first missions you should only take in a single agent. If you take in too many agents then you run the risk of losing some while you are concentrating on just one of them. Stick with one agent until you feel confident with your degree of control. Then gradually start increasing the number of agents and use 'GROUP' mode a lot. Once you have got the hang of that then you can move on to advanced tactics (like the packets with the orange ones and the green ones separated by that bit of plastic (*Eh? – Nutts*)).

CLOSED BARS

■ A major gameplay feature in *Syndicate* is the use of the slider bars to affect each agent's performance. It is possible to complete the game without altering the bars, but I wouldn't recommend it. Although the way in which you interact with the bars is very simple, the way in which they affect the agent is highly complex. Each bar has three values: the Actual level (light bar), Grabber level (dark bar) and Natural level (white line).
ACTUAL: The level that you set is the Actual level. This is the value that affects the agent directly. Moving the Actual level to the right of the Natural level raises the amount of fluid in the body, while moving it to the right lowers the amount.
GRABBER: The Grabber level is the agent's natural bodily defence systems. Overexposure to any fluid damages the body, so the other systems in the body try to counter this. The Grabber level works its way towards the Actual level. When it gets there it begins to drag the Actual level back towards the Natural level.
NATURAL: The Natural level is the base level of the fluid in the body. Exposure to a lot of the fluid will

raise the Natural amount in the body and thus reduce the body's capacity for more. In short the person will not be able to gain as much from a fluid boost as the Grabber level will react more quickly.

What all of this means is that you cannot turn the agent into a superhuman indefinitely. Boosting all the values at the start and keeping the agent running at full throttle for the whole game is impossible.

■ After a period of major activity and boosting, it is advisable to find a quiet spot, if possible, to give your men a rest. Likewise, if you are expecting to have a prolonged period of extreme fluid use then rest the agents beforehand. By 'rest' I mean move the Actual level in the opposite direction to the way you will use it. So, if you expect a situation that demands high Perception, reduce the agent's Perception beforehand. This will trick the body's defences (Grabber level) and give you a longer period of higher Perception.

After all of that how about a more detailed description of what the bars actually do?

ADRENALINE

In its simplest form, the Adrenaline level alters the agents' speed. The higher the amount, the faster the man will run. If the Adrenaline level is reduced to the minimum then the agent enters 'rest' mode. The body reacts to the fluids quicker and tries to balance itself out. What this means is that the Grabber and Natural levels sort themselves out quicker. It also allows enhanced Chest modifications to conduct spot repairs on the body faster than they would normally.

PERCEPTION

Perception governs how aware the agent is of his surroundings. When it comes to weapon using a high Perception will result in very accurate shooting, excellent for sniping or making every shot count. A low Perception results in shots going wild. With automatic weaponry such as the Uzi and Mini-Gun this makes them ideal for mowing down innocent civ... er.. enemy hordes. Ahem. In addition, Perception is best used in conjunction with Intelligence to allow the agent to react to people in a wider area. Of course, if you don't want the agent to react then lower the Perception so that he cannot see them. This is useful for NOT shooting people that you want to keep alive.

INTELLIGENCE

Intelligence has to be used in conjunction with Perception. The Intelligence of an agent affects how he reacts to certain situations. With high Intelligence he will react to people he considers to be a threat. A threat is usually somebody trying to shoot him. If the agent has a selection of weapons then he will pick the best available weapon and shoot the threat. This is very useful for letting the agent clear out hostile buildings since you cannot see where the targets are. If the agent doesn't have a weapon, or he is out of ammo, then a high Intelligence will ensure that he runs away from

the threat. This does mean that he is unlikely to make the mad run to the gun lying on the floor when it is surrounded by armed psychos – lower the Intelligence for that one. There are also situations where you don't want the agent to whip out his weapon and start blasting (like when you are surrounded by police officers). Lower the Intelligence for that as well.

Well that's about it for the bars. As you can see, there are hundreds of different combinations that I can't go into here. Experimentation is the order of the day. That's enough A level Bar Usage, on to...

THE BEST LAID PLANS

■ The most important thing about any mission is the briefing. READ IT! There is a lot of useful information in the briefings and it is always worthwhile spending the money on extra information. Can't find the bloke to <Persuade>? Died whilst trying to find a way through the sewers? Got blown away because the guards were all armed with Tac Nukes and you only equipped your lads with pointed sticks and harsh language? Well you get no sympathy from me. Should have read the briefing.

■ After reading the briefing thoroughly you should then think about what equipment you will need...

The briefing screen gives handy tips on how to complete the level, tactics, and just a little bit of comedy...

'I'D LIKE A BIG GUN THAT HOLDS LOTS OF BULLETS' SCENARIO

Getting the right equipment for the right situation is always important. Take the very first level as an example. Most of the guards are armed with pistols. You have a choice of Pistol or Shotgun. "Aha!" says an observant player. "Shotguns are more expensive than pistols, they must be better! I'll have half a dozen pump action 12 gauges." In walks Rutger Hauer Jr with his arsenal and gets picked off by a weedy bloke with a hand gun. By the time he gets close enough to use his weapons he has been seriously wounded. It all boils down to the right tools for the right job.

■ Pistols in the early levels can easily outrange people with Shotguns. A Shotgun will kill an enemy agent a lot quicker than a Pistol or even an Uzi, if you get close enough to use it. It's no use trying to pop a guy standing a screen away, even with a Mini-Gun. Use a Long Range Rifle instead. See?

WHAT WEAPON?

■ **Pistol**

A free weapon, with a slightly longer range than the Shotgun. It's good as a backup weapon or for use when the opponents have Shotguns.

■ **Shotgun**

Cheap and devastating at close range. Hide in doorways or around corners of buildings and wait for some poor sap to appear before firing. It will damage even the most armoured agent, so be warned.

■ **Uzi**

All agents should carry an Uzi – they should become the mainstay of your arsenal. Relatively cheap to purchase and maintain, the Uzi has a moderate range, is useful against light vehicles such as ground cars or dust carts, but can run out of ammo fast.

■ **Flamer**

The most lethal weapon at a close range. It should be used in the same way as a Shotgun, although it is a tad on the heavy side and unmodified agents should stick to Shotguns. It has stacks of ammo and one blast is usually enough to barbecue even the toughest of agents.

■ **Long Range Rifle**
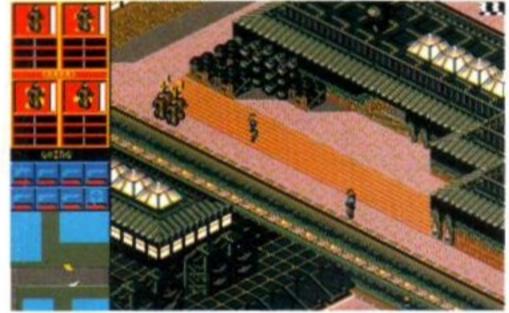
The ideal sniper weapon. Use it to pick off your targets from rooftops far away from the combat zone. It's not much use against heavily armoured targets or vehicles but is quite good at keeping enemy agents at bay.
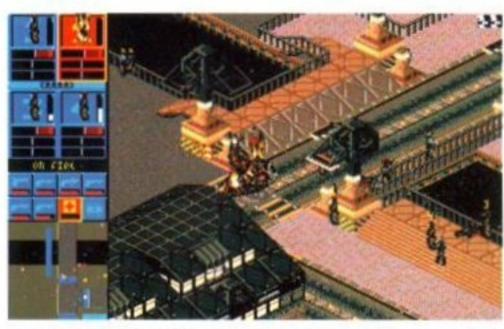
WE'RE A TEAM AND THERE'S NOTHING WE CAN'T HANDLE

■ Moving around the city as part of a team is fairly simple. With 'GROUP' mode on, all agents will accept commands at once. This is devastating if you instruct them to fire at a target. However, it does turn them into a nice target for enemy agents because they are all bunched together, hence the 'SCATTER' option. When moving around in a city that has an active police force, always ensure your weapons are stashed away and not carried openly. You may have to lower the agents' Intelligence to stop them getting their guns out whenever they are startled by something.

Use the group mode (click in-between all four players) for ease of moving around, and increased firepower.

■ When you enter a combat situation that looks like it may continue for longer than a couple of bursts of Uzi fire, you should try to split your squad up. Try to come at the enemy from as many different sides as possible, the principle being that they cannot shoot in all directions at once and you should be able to tag them before they get you.

■ Vehicles and other transport systems should be used as often as possible. Not only are they a lot faster than an unmodified agent, but they provide a larger amount of protection. If the vehicle comes under heavy fire then be prepared to get out and make a run for it; you don't want to get caught in an exploding car! While they cannot leave the road, vehicles under your control can run over people at pedestrian crossings or enemy agents that get too close.

■ The same applies to defending an area. Set your men up with high Intelligence and Perception and ensure they have plenty of ammo. Cover all the attack points and keep your men spread out. Leave them in 'GROUP' mode so that you can bring them all to fire on a single point if it looks like the enemy are about to

Don't, under any circumstances, get caught in an exploding car. It damages your health, and escaping is difficult.

get through. Apart from that let them have a field day.
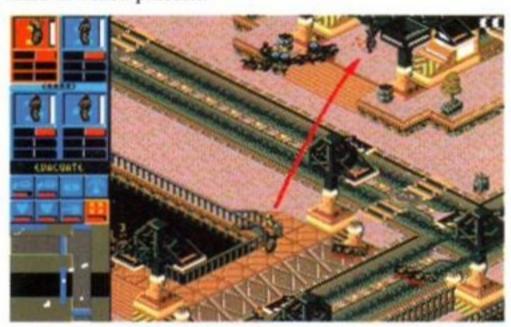
■ Once you have got the hang of moving in 'GROUP' mode you may like to try these other, more complex methods of moving around.

The 'Skirmish Line'. Your agents line out side-by-side to cover almost the screen. They then move forwards until the enemy is engaged. When the enemy is found, then the line can concentrate its firepower on the one spot. With any luck you should have sufficient width in the line to negate almost all cover that the enemy may have and you also automatically attack from multiple directions.

The 'Drag' formation. One agent on point with two others as flankers, three blocks behind and to either side. The fourth agent hangs back with support weaponry (either a Mini-Gun, Long Range, Laser or Gauss Gun). The point man will reveal where the enemy is (ensure he is well armoured or has an energy shield) and if the flank agents cannot deal with them, then open up with the support agent. Don't worry about shooting your own lads unless you are using the Gauss Gun because the explosion will kill your guys too.

DUG IN DEEPER THAN AN ALABAMA TICK

Here is how to get rid of those annoying guards in hard-to-reach places...

A long-range rifle is a good idea for getting into those hard-to-reach places, such as heavily guarded areas.

■ **Any guard in the open**
Shoot them with a Long Range Rifle. Wait well out of range and then pop them in the head. Serves him right for not having any cover. Sucker.

■ **Guards in the open but not far enough away**
If possible, drive past them in a car and give them a taste of Shotgun in the gut. If not, then split the squad and come at the guard from two directions. Get the agents as close as possible using available cover. When in position switch to 'GROUP' mode and move them in, shooting as you go.
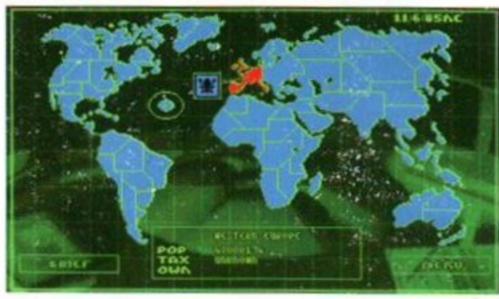
■ **Guards at the end of road bridges**
Run 'em over. Bounce 'em off the bonnet. No problemo. If they're not on the road then drive up and shoot them. Not as much fun though.

■ **Guards behind closed doors**
Come at the door from both sides. You should get right up on it before it opens. Make sure you have Shotguns

selected and high Intelligence and Perception. Turn your Adrenaline right down so that if you do get hit you will heal a lot faster. When you are ready move your agents to the doorway so that the door opens. If the guards are too far back then you will need to select a different weapon.

PLAYING THE FIRST COUPLE OF LEVELS

Western Europe is the first mission, and the easiest. Arm yourself with pistols, go in and take the enemy out!

■ **Western Europe.** Before starting the mission, set your research boys looking into Automatics. Take in two agents with Pistols. Leave one of the agents at the start zone and move the other towards the base entrance. He should be approached by two guards, one from the West and one from the South. As long as his Intelligence and Perception are high then he should deal with them himself. The building to the North of the courtyard (top left of the screen) also houses a guard. Be aware of him as you move towards the target building to the North West. As you approach the building, the target will attempt to leave in the ground car. When he opens the door then blow him away. If he makes it to the car then shoot the car as well.
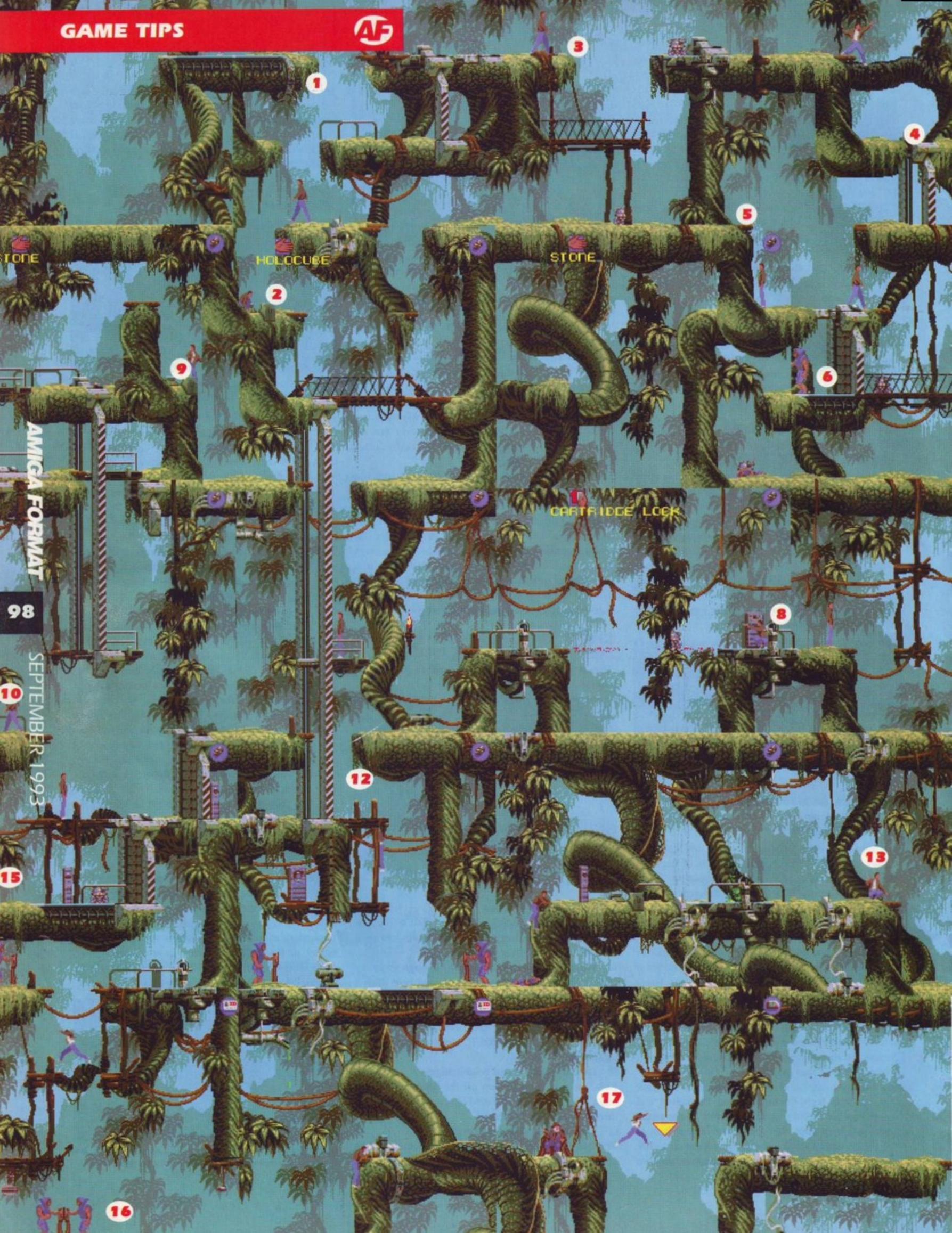
There is also an Uzi up for grabs which will come in handy for the Research Team. It is currently being used by a guard on the South entrance to the base. Drive up to him in the car, park next to him and shoot him in the head. The Uzi is then yours for the taking.

■ **Scandinavia.** Take in two agents. Only use the second agent if the first is lost. Equip them with Persuadertrons and Pistols. If you have the Uzi then bring that too. Head straight for the first target, west of the city. Select your Persuadertron on for the journey, as when you arrive you may be able to pick up a couple of unlucky civvies on the way.

You should now be facing a small building at the top of a large area of steps. There are three guards here; one has a Pistol, one a Shotgun and one an Uzi. If you have only got Shotguns then you will get hammered going up the steps. Try another way. If you have Pistols or Uzis, go for high Intelligence and Perception before going up the steps. Once you have disposed of the guards and robbed them of their weapons head inside and <Persuade> the target. To do this, select the Persuadertron, and click the pointer on the South East corner of the building (pointer be a crosshair first). Once he is taken, head towards the second target leaving the Persuadertron on and finally the drop zone.

Scandinavia: Get a Persuadertron and some weapons, go in, shoot the guards, and persuade your target. Simple.

Flashback

Reviewed *AF*45 ■ US Gold 021-625 3388

Even Nutts finds this game difficult to finish in a flash. That's why he's got **Chris Dolman** of US Gold to provide a solution for the first part, Normal level…

9 Throw the stone on to the switch to keep the lift down, then go left and pick up the teleporter. Pick up the two stones, then go down the other lift.

10 Save your game using the Save post. Go back to the energy recharger (7) then go up along the rope bridge, shooting the mutant on the way. Go up, then use the switches to activate the lift, enabling you to go up to the top right of the screen.

11 Swap the teleporter with the wounded man for his ID card, then go back down over the energy bridge.

12 You should see two mutants from here. Drop carefully down on to the ledge below, draw your gun, duck down and roll to the right. Shoot the mutants. Walk right, press the switch to turn off the haze, then jump over the sensor, and walk into the next screen – shoot the droid immediately.

13 Stand on the ledge above the next mutant, and throw a stone over his head. While he is distracted, drop down and shoot him. Pick up the 100 credits he drops, then go into the next screen and pick up the key, and the other 50 credits.

14 Draw your gun, then roll right into the next screen. Shoot the mutant. The 500 credits you need are in the top right-hand corner. While climbing up, try not to touch the sensor which is next to the generator – this activates two lasers on the previous screen. Now go back to 10 and save the game. If you have set the lasers going, you will need to time your moves very carefully, and duck a lot! Recharge your shield if it gets low.

15 Drop down and shoot the droid, then insert your ID card into the card slot machine. Go through the open door on the right, then drop down, shoot the mutant, and walk left-wards to the end of the ledge. Lower yourself down carefully.

16 Drop down to the mutants, drawing your gun in mid-air, and shoot the mutants as quickly as possible. Keep going to the right, and give the 500 credits to the old man.

17 Now jump down the hole, and prepare for level 2. Hooray!

1 From the start, drop right off the first ledge, and left off the second, then walk left to drop into the screen below.

2 Pick up the Holocube, which automatically opens a door later in the level.

3 Go back to the top of the screen above, then run right and take out the first droid.

4 Jump right across the gap, then drop off the ledge so that you are just above the mutant's head. Draw your gun, then drop down in front of him and shoot. Walk left and drop into the next screen, then go left and pick up the stone.

5 Jump onto the ledge, and you will find 10 credits. Go right, then drop down on to the same level as the droid, turn and shoot. This will take some practice to perfect.

6 When the mutant and the droid are dead, collect the cell which the mutant has dropped.

7 Pay a visit to the recharge machine below and to the right – charge the cell, and the shield if necessary.

8 Go left, and insert the cell into the bridge slot. Cross the bridge, shooting the droid on the way, then take the lift up to the top.

Helping Hand

Andy Nuttall is a philanthropic man. He spends hours searching out the cheats and tips that readers ask him for, but he doesn't like to talk about it.

GET SOME ACTION
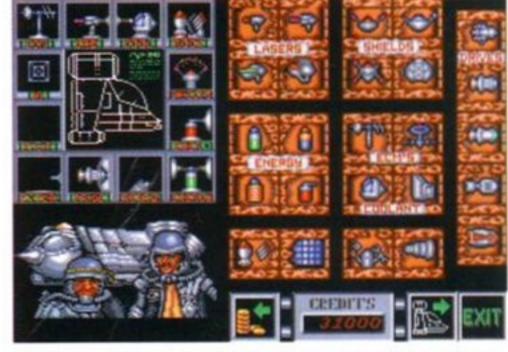
The secret to eternal life is apparently 'NIGHTSHIFT'. Well in *Indiana Jones – Action Game* it is.

I've been having some problems with *Indiana Jones and the Fate of Atlantis – Action Game*. Can anybody give me a cheat for it?

Keith Edeleston
Leeds

Here's Mark Birmingham of Liverpool (!) to the rescue... While on the title screen, simply type in NIGHTSHIFT, which will give you infinite lives. You can also skip levels by pressing F9. Thanks Mark, have a copy of Walker for your tip.

EASY MONEY

Rogue Trooper – know any tips? Nutts doesn't, but he's willing to pay a man who does know some.

Do you know of any cheats for *Rogue Trooper* by Krisalis and *Blood Money* by Psygnosis?

PJ Taylor
Street

Er, Rogue Trooper no; Blood Money yes – pause the game then press the Help key for infinite lives.
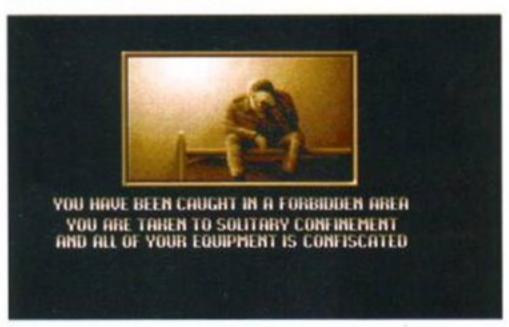
NO MODEM FOR F1GP

Recently I have noticed that the version of *Formula One Grand Prix* for the PC has both modem and serial link facilities. Are MicroProse producing *F1GP* with these facilities for the Amiga?

K McKale
Fareham

Unfortunately not. Although the Amiga could handle such a link happily, it seems MicroProse have no plans to feature a link in the foreseeable future. One way to change that, however, is for all Amiga owners who would like to see a link-up option to write to MicroProse and ask them about it. Then, you never know...

NO ESCAPE

YOU HAVE BEEN CAUGHT IN A FORBIDDEN AREA YOU ARE TAKEN TO SOLITARY CONFINEMENT AND ALL OF YOUR EQUIPMENT IS CONFISCATED

OK, the war ended nearly 50 years ago, but Laurence Caruana is still stuck in Colditz. Can anyone rescue him?

Does anyone have cheats or hints for *Escape From Colditz*? The furthest I can get is the outer courtyard – then I run out of passes and end up being shot. Also, I can't get out of the tunnels.

Laurence Caruana
Thornton Heath

Can anybody shed some light on this problem?

RUDE KID

I'm writing for help on *Viz - The Computer Game*, by Virgin. I would like any cheats or tips you have.

Mark Bradley
Brierley Hill

*There is a cheat, but it's a bit rude. (If you are under 18, you shouldn't have the game anyway, so don't bother reading this bit). On the character selection screen, type in WHAT A GREAT LOAD OF B******S – fill in the asterisks yourself (this is a family magazine), then use the keys 1 to 5 to skip levels.*
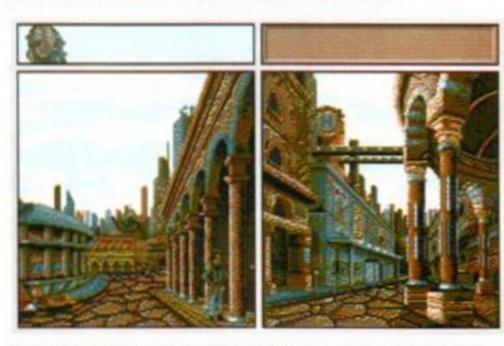
IT'S A RAT TRAP

In *Operation Stealth* I'm stuck in the wash room after the rat tunnels. I just can't get out. Help!

Dino Jackson
Peterborough

When you arrive in the bathroom, first operate the guard. Take his boots and laces, then use the laces on the guard. Take the napkin, and use that on the guard, then take the clothes and the glass from the sink. You can now leave the room.

LOOK CAREFULLY

Holy *BAT 2* tips Nutts! This is just the sort of help Leon needs to help him get on with the game!

I'm having trouble with *BAT 2*. I've got the plans, the axial thing, burnt a hole in the wall, had the contact lenses on my eyes to be scanned, got to the safe, opened it, then... nothing. What am I supposed to do?

Leon Pennington
St Helens

There are some objects in the safe – you need to use the magnifying glass on the safe to find them. After that, go back to the terminal and rest, then go on to the third mission – the Welco company contracts.

TRIP TO WORK

I'm stumped on mission four of *Flashback*. I have about 90 seconds to change a faulty card in the generator before it explodes. I can get to the generator with about seven seconds to go, picking up the stone along the way. Then when I try to insert the card, nothing happens. Can you tell me where I'm going wrong?

Timothy Davies
Camberley

When you're near the generator, you should be able to see a trip switch on the bottom right of the screen. Throw the rock at it, so that it switches, and this will activate the card slot. Now insert the card.

JERKING MY CHAIN

After reading the June issue, I immediately tried the cheat for *Warnygog* but the monkey did not transform. Plus, how do you get past the Samurai on the second level?

Dave Penn
Bridgenorth

Look, I've never heard of Warnygog, the monkey, the apple, the eternal lives – and I haven't heard of bloody Rompder! If this is a real game, will someone help Dave' out, and put me out of my misery. **AF**

If you're stuck on a particular game or have a solution to a letter printed in the magazine, then write it down and send it in to us at HELPING HAND Amiga Format, 30 Monmouth Street, Bath BA1 2BW.

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Mega-multi

Learn how to emulate multimedia programs by programming with your AMOS Coverdisk.

Click on any button and the picture assigned to that button pops up on to the screen. Click the mouse anywhere on the picture to return to that menu.

MULTIMEDIA IS an over-used word and it has now come to be associated more with CD-ROM, than with its real meaning. Usually multimedia means a computer being able to input, create and output text graphics, audio and video on one machine. However words can change their meaning – it's a fact of life – and what we now call multimedia is really hypermedia, but let's not quibble about terminology.

Hypermedia or multimedia programs have been around for the Amiga a lot longer than on other machines, and programs like Electronic Arts' *Deluxe Video III*, INOVAtronics' *CanDo* and Scala UK's *Scala* are good examples of what you can do with multimedia on the Amiga. But what can you do in *AMOS* to keep up with all this hi-tech presentation and tutorial software? Well by using *AMOS* you have control over all aspects of the Amiga's sound and graphics. You can load screens, overlap them with other screens, add text in any font you like, in fact all the things you would expect from a multimedia program. You just have to adapt the program somewhat. So let's see what we can do to make *AMOS* look and feel like a multimedia program…

AMOS multimedia

To create a simple multimedia style environment, the sort you would create with something like *Hyperbook* or *CanDo*, you must make a simple button interface, and pick a nice simple task to begin with, like making a quick database/viewer of pictures, all of which are held in memory banks for ease of use. Voilà, instant CDTV... NOT! The thing is it would be easier to get the program to grab the files from disk, and we'll show you how to do this later.

Making multimedia style programs in *AMOS* is simple. You can create windows and flow text into them, sliders can be made to control the flow of text, and buttons can be created to take the user through your program. OK, so there aren't any hooks for laserdiscs or CDTV players, but you can create a neat tutorial environment for someone to roam around and look at your pictures and text while listening to music.

As with all *AMOS* programming, forethought is essential – work out what you want to do before you start tapping in code or drawing pictures. Experimentation has its place, and very good fun it is, but it doesn't really get you anywhere. Planning and execution are the two stages you must go through to get a good program out the other end. Where are the buttons on screen? How will I access them? What will happen when the user does something I haven't catered for? These are questions which need answering before you decide the colour palette for the menu screen.

One of the first things you must do when creating a button-fed multimedia environment is to create a sort of zone map. Before you can read the screen and the position of the mouse on it, you need to set zones. A neat trick is to use *AMOS*'s draw function to make some boxes on the screen, and then use these as the basis for your on-screen buttons. It sounds dull, but it's an easy and quick way to figure out the screen co-ordinates of your zones if you planned them in the first place. A common mistake is to draw lots of exotic buttons on screen first, and then work out where their on-screen co-ordinates are later down the line.

Art Department Professional can be used to create the small versions of the pictures, although any Public Domain program which can scale down pictures will work just as well.

media

Use this easy program for the *AMOS* box tool to create some simple boxes on the screen:

```
Screen Open 0,320,256,32,Lowres
Box 10,10 To 100,100
Box 110,10 To 200,100
Box 210,10 To 300,100
Box 10,110 To 100,200
Box 110,110 To 200,200
Box 210,110 To 300,200
```

This program produces a couple of rows of six blank boxes on a 256 line screen. (NTSC users will obviously have to rejig the screens a little to fit into 200 lines.) These boxes were figured out using a bit of graph paper, which enables you to then go on to use the figures in your SET ZONE commands in the finished program, as you will soon learn.

Write down the figures which created these boxes and save the resultant screen using SAVE IFF. In fact you could simply merge the program with your new program and just change the box commands to Set Zone commands. This cuts down the margin for error, such as typing in the wrong figure in the wrong position.

Next load the screen you saved into *Deluxe Paint* or another paint program, and make it visually more interesting. What we're going to do is put small versions of six pictures on these buttons, and then when the user presses a button the picture comes up on screen. When you've made the buttons look good and in 3D, you are ready to fix the little pictures on the buttons.

The small versions of the pictures have been created using *Art Department Professional 2*, but you can use any program – even a Public Domain one which can scale a picture down and reduce the amount of colours. In this case, each picture has been scaled down to 25 per cent of its normal size, and the colours reduced from HAM to 32 colours. Once this is done the small pictures can be put on the buttons in *DPaint*. This is best done in HAM mode, since you can load the button picture as a brush and using the brush REMAP menu selection you get all the colours back. Once all the buttons have been filled, you can change the screen type back to 32 colours to save memory. Right that's the graphics sorted, now what do you do with them?

Fill yer banks

To pop the graphics into the memory banks, load each picture as an IFF and SPACK it. In direct mode type:

```
Load Iff "pic1.iff",0
Spack 0 To 6
```

where 6 is the memory bank you want to load the picture. The main one with all the buttons wants to be in bank 6, and the six pictures want to go into banks 7-12 respectively. Once you have loaded the memory banks, save your *AMOS* program, since the banks will be saved with the program, and that means you won't have to load the pictures again.

If you want to have a *SoundTracker* module playing at the same time, then load this too, usually to bank 3.

Now you have to type some code so pop back to edit mode and you can do that. The REMs at the front are optional, as usual. They don't do anything, they just tell you who wrote the program and when. (*But not why... Ed*)

The first job is to turn the music on:
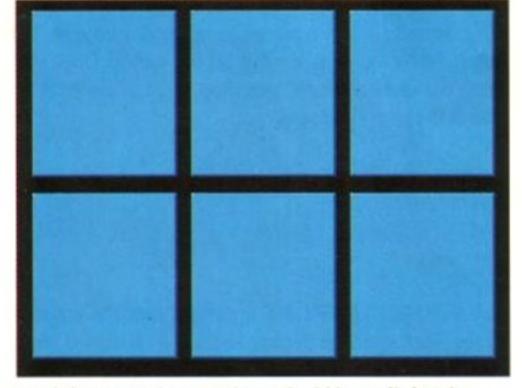
```
Track Loop On
Track Play 3
```

This activates the *SoundTracker* module in bank 3, if indeed you opted to add one.

Next we change the shape of the cursor with:

```
Change Mouse 2
```

which makes it a cross-hair type cursor, making a bit of a change from the usual big arrow deal. Having done that you are now right into the program. Incidentally, you may notice that at no point do you

Load the screen into *DPaint* and add bas relief and a white dot in the corner to give the buttons a 3D look.

have to set the screen size and colours. When you unpack a picture it automatically sets up a screen in the right size for the picture it's unpacking, so you don't need to specify any measurements.

```
Unpack 6 To 0
```

This unpacks the main screen on to screen 0, which is the screen you will be coming back to all the time. This is the screen on which our zones will be set and so the mouse clicks will only be read on this screen.

Next we do a little something to ensure that the mouse doesn't default to an NTSC screen size, which sometimes happens.

```
Wait Vbl : Limit Mouse
```

Using LIMIT MOUSE on its own defaults to the biggest screen size available, which in this case is 320 x 256.

Next we have to reserve the zones we will be using, in this case 6, one for each button on the screen.

```
Reserve Zone 6
```

and then we can set the zones using SET ZONE. The figures for the zones may seem familiar to you:
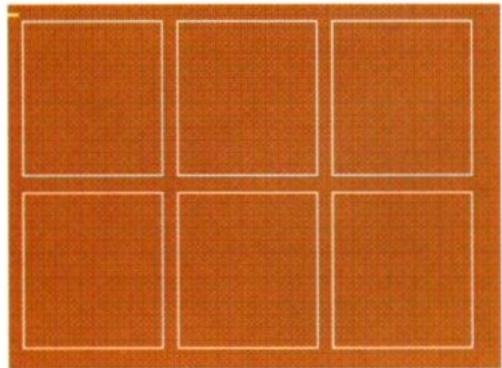
```
Set Zone 1,10,10 To 100,100
Set Zone 2,110,10 To 200,100
Set Zone 3,210,10 To 300,100
```

Continued overleaf

ST6.IFF   AKIRA.IFF   ARNIE.IFF
BABYLON.IFF   JULIA.IFF   TRUE.IFF

Once all the pictures are put on the buttons, your menu screen is finished and can be loaded into a memory bank.

The first program draws six boxes. Once you've saved off the screen, you can erase the program and start again.

```
Set Zone 4,10,110 To 100,200
Set Zone 5,110,110 To 200,200
Set Zone 6,210,110 To 300,200
```

This is because they are the same figures used to draw the initial boxes, which you later would've brightened up into a main screen. Once the zones are set, any events which take place in those zones can be detected and sent to the part of the program which decides which picture to show.

Now you're into the main program loop. This part zooms around and around detecting zone events, and directing the computer to display whichever picture is being pointed at and clicked on.

```
_MAINLOOP:
If Mouse Key and Mouse Zone=1 Then
FLAG=7 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=2 Then
FLAG=8 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=3 Then
FLAG=9 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=4 Then
FLAG=10 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=5 Then
FLAG=11 : Gosub _SHOWPIC
```

```
If Mouse Key and Mouse Zone=6 Then
FLAG=12 : Gosub _SHOWPIC
Goto _MAINLOOP
```

You will see it is a closed loop, and each zone is tested to see if the mouse has been clicked inside it. If the mouse has been clicked in zone 1 then the variable FLAG is set to 7, and that means that the picture in bank 7 is unpacked and shown using screen 1. The reason screen 1 is used is so that we retain screen 0 and the buttons set up at the beginning. Screen 1 overlays screen 0, and when you want to get back to the menu you can just click the mouse button on the picture you are viewing.

To do this use the _SHOWPIC subroutine. Each time a mouse click is sensed (the left or right mouse button will do) the subroutine is GOSUBed, which unpacks the correct picture and then waits.

```
_SHOWPIC:
Unpack FLAG To 1
```

The routine SUBSHOW waits for a mouse click to equal 1 or the left mouse button, and then it drops out of the loop.

```
SUBSHOW:
X=Mouse Key
If X<>1 Then Goto SUBSHOW
```

If no mouse click is detected once the picture is on the screen, then the picture stays on the screen. Once you press the mouse button, you drop through the subroutine to the next command.

```
Screen To Front 0
Screen 0
Wait 25
Return
```

The SCREEN TO FRONT command flips the screen 0 to the front over the picture and the SCREEN 0 command means that screen 0 is active and so the zones can be read again.

Although the picture you last saw is still active underneath the main screen you can't see it because it's covered with the main control screen. Once you click on another button, another picture is unpacked to screen 1 and it is auto-flipped to the front once more.

Because the program is a sealed loop, the only way to quit is to press CTRL-C.

The first step would be to strip out all the

UNPACK commands and make the computer load the pictures from a directory on the disk. Obviously you must first direct the computer's attention to the disk in question and this is done with:

```
Dir$="<path>"
```

for example:

```
Dir$="DF0:"
```

which has to be at the front of the program. Then all you must do is replace the _SHOWPIC routine with a routine to load the appropriate file from disk. To load an IFF file you use:

```
Load Iff "<filename>"
```

although in this case you could just as well name your files '7' and '8' all the way up to '12' and load them like this:

```
Load Iff FLAG,1
```

and as long as the disk has these files on it, you will load and view the pictures. You could even put in the file names, but for the sake of convenience and speed, it would be easier to call them a short number or short word like PIC1, PIC2, and so on.

Enhancing the program

Another really neat enhancement would be to have front and back gadgets at the top right of the main screen, and use *AMOS TO BACK* to flip to another multitasking program, plus a close gadget at the top left, just like any other Amiga program. Simply draw them on the screen and zone them like the other boxes, linking them to subroutines which perform the front and back or quit functions.

Why not try using 'earcons', these are audio equivalents to icons. Or try using a sound sample that is triggered the moment a button is clicked? Or how about an animated button to show the button has been pressed? Work on these ideas until next time when we will try out more ideas to make your *AMOS* programs bigger and better. Happy coding!

That listing in full

```
Rem ** Multimedia Demo    **
Rem ** ©1993 Amiga Format **
'
'Track Loop On
'Track Play 3
Change Mouse 2
Unpack 6 To 0
Wait Vbl : Limit Mouse
Reserve Zone 6
Set Zone 1,10,10 To 100,100
Set Zone 2,110,10 To 200,100
Set Zone 3,210,10 To 300,100
Set Zone 4,10,110 To 100,200
Set Zone 5,110,110 To 200,200
```

```
Set Zone 6,210,110 To 300,200
'
_MAINLOOP:
If Mouse Key and Mouse Zone=1 Then
FLAG=7 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=2 Then
FLAG=8 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=3 Then
FLAG=9 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=4 Then
FLAG=10 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=5 Then
FLAG=11 : Gosub _SHOWPIC
If Mouse Key and Mouse Zone=6 Then
```

```
FLAG=12 : Gosub _SHOWPIC
Goto _MAINLOOP
'
_SHOWPIC:
Unpack FLAG To 1
SUBSHOW:
X=Mouse Key
If X<>1 Then Goto SUBSHOW
Screen To Front 0
Screen 0
Wait 25
Return
```

Power caused a stir when they released their colour hand scanner for the Amiga. Now rivals Golden Image have struck back with a model that can even use the new AGA modes. **Richard Baguley** investigates.

The AlfaColor is the first scanner to support the Amiga's AGA modes.

Golden Image AlfaColor

Golden Image (UK) Ltd ■ £299 ■ Colour Scanner

GETTING IMAGES INTO your DTP documents can be an expensive business, especially if you're working in colour. There are a variety of expensive flatbed scanners around, but what the market really needs is a high quality, but inexpensive hand scanner. Golden Image's new product is certainly cheaper than a flatbed, but is it any good?

In terms of hardware, this unit has three parts. First off there's the scanning head, which is a good looking matt black model. A single button on the top activates the scanner, and three switches and a rotary control set the kind of scan you require. This plugs into the second hardware component, a switch box, which is about the size of a small paperback and has a 25-way socket on the back. This acts as a switch between the printer and the scanner, both of which use the parallel port.

Switching is done by pressing a button, and two lights show which device is active. Given that the scanner needs access to the parallel port, this is the best solution I've come across to the problem of using both scanner and printer without unplugging. The third piece of hardware is an adaptor which fits into the floppy disk port and supplies power to the scanner. This could cause problems if you've got several drives connected, but it ran fine with an external floppy on an A1200. An external power supply is also available.

The entire scanning operation is carried out via one program, with all of the functions accessible by using the mouse. Using the software is simple, and there's no complex cutting, pasting or scan joining commands. However, it does have some quirks. For example if you want to change the scanning mode or the resolution, you have to change the settings on the scanner head and then those in the

The **ALFACOLOR HAND SCANNER** is available from Golden Image on 081-365 1102

program. If the two don't agree, the software complains. Surely it would be better to control this just from the scanner head?

Scanning can be carried out in five modes: SC (Super Colour, 6 bits per colour, giving 262,000 colours), CG (Colour Grey, 4 bits per colour, giving 4,096 colours), MG (Monochrome Grey, 6 bits per pixel, giving 64 shades of grey), D (Dithered, 1 bit per colour, but can use any of 3 dither patterns to simulate colours) and T (Text, 1 bit per pixel, black and white). Resolutions range from 50 dpi (dots per inch) to 400 dpi, although the SC and CG modes have a maximum of 200 dpi. The SG mode only works on AGA equipped machines.

This model is the first to enable you to use the new AGA modes on the A1200 and A4000, so you can now digitise in up to 256,000 colours. In order to achieve this, the scanner head has to pass the computer 8 bits of colour information on each of the three colours, which is not a very fast process. If you move the head too fast, an irritating buzzing noise warns you, and if you ignore this, the image stands a good chance of

becoming corrupted. In practice, the best results are achieved by moving the head at about one centimetre every two seconds. If you're dealing with a large image, be prepared for a long scan and a sore hand afterwards.

Given a good image to scan, this unit is capable of producing great results. However, if your original lacks contrast, or the colours are weak, then you are likely to have problems. I tried scanning in several images from the magazine, but most looked disappointing, because our photographs are too dark for this scanner. A beach image from a photo library stock book (see image below left) looked much better. The results when running in either 64 grey scale mode or text were also impressive, and the ability to scan at 400 dpi is useful if you're using one of the new generation laser printers such as the HP Deskjet IV.

The obvious comparison is with the colour Power Scanner, and there's little to choose between the two apart from the fact that AlfaColor supports AGA modes. Power Computing are currently working on an upgrade to their software, which will be made available free to all registered users. ◢◣

Given a good quality image to work from, the AlfaColor hand scanner is capable of producing great results. However, if your pictures don't have much contrast, you willl have problems.

Even with a particularly poor subject (Richard Jones AF49, page 66), the scanner produces good 400 dpi 64 grey scale images on AGA machines.

AMIGA GOLD FORMAT

Having already received a massive 88 per cent for the original Vidi-12, Rombo are back with a new AGA version. **Jason Holborn** inspects...

Vidi-12 AGA

Video Digitiser ■ £99.95
Rombo Productions
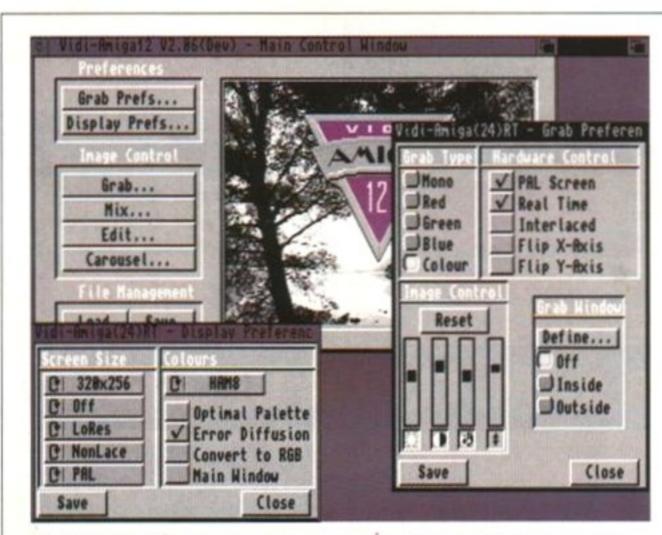
IF THERE'S ONE company in the Amiga market-place that is synonymous with video digitisers, it must surely be Rombo. Having already sewn up the low cost digitiser market with its range of Vidi digitisers, Rombo are back with the release of Vidi-Amiga 12 AGA, a video digitising system that offers full AGA compatibility when used on an Amiga 1200 or 4000. Obviously all the standard Amiga screen modes are there, but this latest release will display digitised images using the AGA chip set's new 256 colour and 262,000 colour HAM8 screen modes. All this for under £100?

Most digitisers require you to use rather unreliable red, green and blue filters when capturing colour images, but Vidi-12 AGA gets around this thanks to its built-in RGB splitter, previously only available as an option to the older Vidi-Amiga units. You still need colour filters if using a mono video camera, but Vidi-12 AGA will happily work on any other composite colour signal such as that produced by both video recorders and cameras.
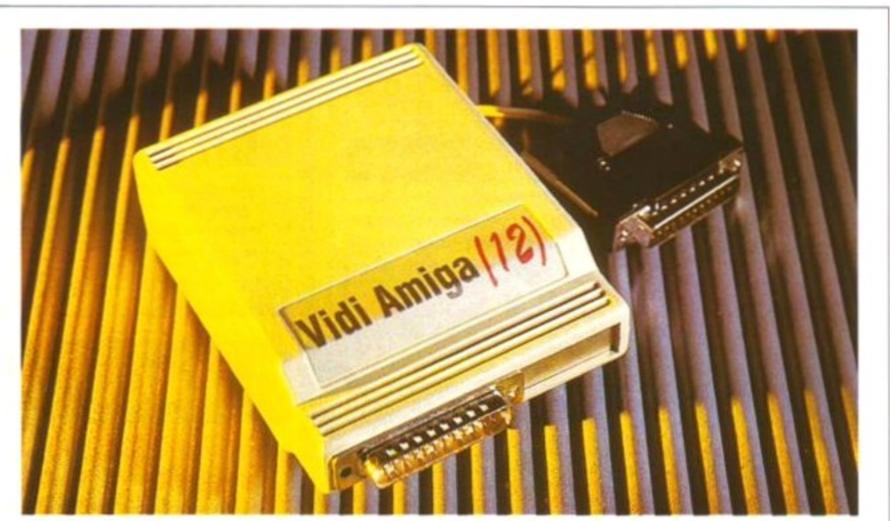
Vidi-12 AGA connects to the Amiga via the machine's parallel port. To supply the digitiser with additional power, there's an extra lead at the side of the digitiser box that connects to the Amiga's disk drive port. The presence of that extra lead means that Vidi-12 cannot be used with an external disk drive. On an A500/600 or A1200, the Vidi-12 hardware

Richie and Eddie may have reached rock bottom, but the same certainly can't be said for Rombo's new Vidi-12 AGA video digitiser. Offering image grabbing with up to 262,000 colours (on an AGA machine), Vidi-12 is impressive stuff.

VIDI-12 AGA is available from Rombo Productions on 0506 414631

Grabber Control Panel

overlaps the serial connector and the right hand sound jack, so you can't have a modem and both audio jacks connected at the same time as the digitiser hardware. Rombo would have been better advised to have used a shorter length of ribbon cable to connect the digitiser to the machine's parallel port rather than the direct connection they've plumped for.

The new Vidi-12 AGA digitiser box has changed colour too - the old black Vidi-12 boxes looked rather strange sticking out of the back of cream-coloured Amigas, so it's nice to see that the new box is the same colour as the Amiga itself. The Vidi-12 box doesn't contain any external contrast and brightness controls like the original Vidi - these are now software

The Vidi-12 software provided gives you considerable control over the digitising process.

The Vidi-12 AGA hardware is a small and neat plastic unit (as always) which plugs into the parallel port, but this time it includes and in-built RGB splitter.

IMAGE PROCESSING OPTIONS

One of the most useful features offered by Vidi-12 AGA is its powerful image processing options. As well as those designed to enhance digitised art work, Rombo also include a selection of 'special effects'. Several of these 'operators' can be applied to an image simultaneously, allowing you to perform quite complex image processing operations en masse. The only grumble I could possibly level at these options is the fact that many of them are too slow and there's no way to abort an operation once it has started. What's more, you're not given any sort of control over the operators - the 'Threshold' operator (which creates monochrome line art from a colour image), for example, is rendered useless by its lack of user control. Rombo claim that their new real-time version of Vidi-12, will offer *ADPro*-like controls, but that's of little comfort to the rest of us.

Because Vidi-12 holds all its images internally as 12-bit, you can quickly and easily change between image formats using the 'Mix' screen. This supports the same screen formats and colour combinations as the grabber, so you can quite easily convert between HAM8 and normal HAM should you want to hand out digitised images to your AGA-less friends. Images can even be saved out as 12-bit files, so there's no reason why you couldn't pass them across to a dedicated image processing program such as *ADPro* for further manipulation.

OK, so it's not really very useful, but you've got to admit that Vidi-12's 'Psychedelic' operator produces some pretty unusual results. The psychedelic operator works by 'solarising' the image.

The Vidi-12 'Edge Detection' operator creates a sort of charcoal effect. The way this works is by highlighting only the edges of an image, and then removing shaded and solid areas of colour.

Finally, we have the 'Negative' operator. As its name suggests, this operator produces a colour and brightness reversed version of your image that looks just like those strips of film you get from a photolab whenever you have your holiday photos developed. Looks nice, but not very useful.

controlled. Vidi-12 can digitise from either a standard composite video signal or a Super-VHS signal via a separate Y/C connector. SVHS gives much better results, although very few of us have video recorders capable of producing this signal.

The Vidi-12 software has undergone bit of a shake up. Vidi-12 2 uses the now standard look and feel of Workbench 2 to provide a user interface that is both easy-to-use and attractive. The main Vidi-12 AGA screen is organised into a single window which contains all Vidi's digitising and touch-up options. At the heart of Vidi are the 'Image Control' gadgets that give you access to the Vidi grabber, Vidi's built-in image processing engine and *Carousel*, a sort of mini animation sequencer.
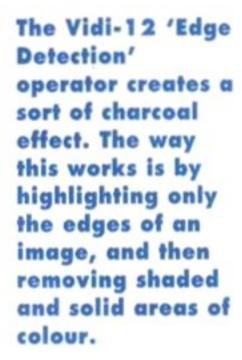
Moving on to the Vidi-12 grabbing screen, the range of controls and options is very comprehensive. Vidi-12 can be set up to either grab a single frame or, for animation work, a whole series of frames limited only by the amount of free RAM inside your machine. And, because it works in real-time, grabbing a continuous stream of frames produces very smooth digitised 'movies' that can even be saved out to disk in standard IFF ANIM format. One particularly nice feature is the new

'Time Lapse' facility that can be used to set up Vidi-12 to grab a single frame at regular intervals between half a second and six hours! The grabber screen also provides control over the contrast, brightness and saturation of the incoming signal, allowing you to fine tune your grabs to produce the best possible results.

The range of screen modes offered by the Vidi-12 grabber is impressive. As well as the standard high, medium and low resolution screens with up to 32 colours, version 2 of the Vidi-12 software now supports the new AGA chip set, allowing you to grab images with up to 262,000 colours. These grabs eat memory, especially when grabbing colour images in hi-res. Although Vidi-12 is a real-time digitiser, it cannot digitise colour images in real-time. So you will need a video recorder with a very stable pause facility if you intend to grab colour images.

Vidi-12's new *Carousel* option is certainly a vast improvement over the previous release. Instead of sticking with the 'film strip' approach used by Vidi-12 version 1, Rombo have moved back to the old cameo representations used in the original VidiAmiga software way back in 1988. This *Carousel* facility displays any sequence of 12 frames (on a PAL system) as mini representations. You can then deselect any of the frames, set the start and end position for your sequence, and then play it back as an animation.

Rombo certainly have been hard at work upgrading Vidi-12 since we reviewed it in *AF*41 (88 per cent). Although the previous release suffered from the dreaded 'HAM fringing' that plagues many budget digitisers, Vidi-12 AGA manages to consistently produce images that could give even the more expensive digitisers such as JCL's ColourPic and ACS's V-Lab something to worry about. The lack of controls in Vidi-12's image processing section is slightly worrying, but even this is overshadowed by the shear brilliance of Vidi's results. Digitising a 'live' signal from a SuperVHS camcorder produces images of incredible clarity. If Rombo keep on producing bigger and better digitisers at this rate, there isn't going to be any competition left! **AF**

Vidi-12 AGA

SPEED ● ● ● ●
Not real-time, but even a HAM8 screen is grabbed and displayed in under 10 seconds!

DOCUMENTATION ● ● ● ●
The contents of the manual are very good, but presentation still leaves a lot to be desired.

ACCESSIBILITY ● ● ● ● ●
Plug it in, connect up your camcorder and load the software - it's as easy as that!

FEATURES ● ● ● ● ●
Vidi-12 AGA boasts virtually every digitising option you could ask of a low cost digitiser.

VALUE ● ● ● ● ●
Vidi-12 always has been great value for money, but Vidi-12 AGA is even better!

AMIGA GOLD FORMAT **90%**

Smart Power

Apple's Newton MessagePad: reads handwriting, stores facts, sends faxes, organises lives

– in the palm of your hand

Your Personal Digital Assistant :

mac
FORMAT

issue 4 - out August 3rd

A new kind of Apple Mac magazine

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MONITORS

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1084ST	£189

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This all new singing and dancing range of monitors from Commodore are designed especially for the A1200 and A4000 range Amigas. Both monitors include leads and a stand. These monitors are also packin' a new improved stereo sound system, bassy or what.

1940 MONITOR 0.39mm DP	£279
1942 MONITOR 0.28mm DP	£379

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This is a groovy little number. These guys make the tubes for all the Commodore monitors and produce a rather fine piece of kit themselves. This monitor carries the same specs as the CBM 1084ST. Sorry no leads or stand with this one, but you do get Microprose's F19 stealth fighter free.

8833MkII MONITOR	£189

KNOCK A TENNER OFF TOTAL PRICE IF BUYING ANY
MONITOR WITH AN AMIGA

SCANNERS

You've seen the film now buy the toy! No seriously folks, if you're frustrated by a lack of decent clip-art for your DTP projects, snap up one of these beasties.

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EPSON GT-6500 FLATBED COLOUR	£899
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SCSI CABLE KIT	£44

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GVP ACCESSORIES

33MHz 68882 PLCC	£69
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For all you Comm Freaks out there, we now stock a full range of modems. So if you fancy chatting to the world or hacking in to Lloyds bank take a butcher's at these.

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PACE LINNET QUAD MODEM	£224
PACE LINNET V32 MODEM	£359
PACE MICROLIN POCKET MODEM	£269
PACE MICROLIN FAX/MODEM CARD	£224
PACE ULTRALINK 32 PLUS MODEM	£629
PACE ULTRALINK QUAD MODEM	£269

Fancy a BASIC programming language that runs faster than AMOS, but can still do the same job? **Jason Holborn** investigates Blitz Basic 2, a language that may finally bring an end to AMOS' monopoly.

Blitz Basic 2

£69.95 ■ Programming Language ■ Acid Software

FOR SEVERAL YEARS, Europress' *AMOS* has ruled the *BASIC* programming roost. Faced with such opposition as GFA and *HiSoft BASIC*, *AMOS* (and more recently *AMOS Professional*) has led the field with a clear margin thanks to its unrivalled ability to 'hit the hardware' (access the custom chip directly), allowing BASIC programmers to squeeze machine-code like power from their machines, without having to get their hands dirty with Assembler code. No doubt if *AMOS* were to become more popular than it already is, chances are the Monopolies Commission would have something to say about it!

However, *AMOS* may have finally met its match with the UK launch of *Blitz Basic 2*, a BASIC-like programming language from those prolific New Zealand coders, Acid Software. Public Domain prospectors may well be familiar with Blitz's obvious talents, since Acid have already released a trail of PD hits. These include *Insectoids 2* (a brilliant *Galaxians* clone), *Defender* (an Amiga version of the furious Williams arcade classic) and *Zombie Apocalypse* (*Operation Wolf* meets the gore zone!), and *Speed* (the card game on this month's Subscriber's disk), all of which are written entirely using *Blitz Basic 2*. Acid kindly include all these games (and more!) with the *Blitz Basic 2* package, so you can get a taste of its power straight away.

The heart of *Blitz Basic 2* is 'Ted', Blitz's integrated source code editor and compiler program. In many respects it is similar to the

Skidmarks (one of the games provided) features high speed scrolling, great sonics and frantic gameplay — what's more, it's written completely in Blitz Basic 2!

BLITZ BASIC 2 is available from Acid Software on 010 64 93581658

editor used by *AMOS*. It may not quite look as stylish as the *AMOS Professional Editor*, but in terms of raw programming power, Blitz's editor is the biz. Not only can you edit source code with full block cut, copy, paste and search/replace facilities, but you can also run your code from within the *Blitz Editor*. What's more, the *Blitz* editor runs under Intuition, the Amiga's WIMP environment, so it can be run in conjunction with other programs without having to flick back and forth between Intuition and hardware-level 'viewports' (often causing the machine to crash in the process) like the *AMOS* Editor.

Built into the *Blitz* editor is the language compiler that takes the code you enter and transforms it into ultra fast machine code that can be run either from within or separately from the *Blitz* editor. Unlike some BASIC compilers I could mention, Blitz's compiler doesn't simply tack a runtime system on to tokenised code – the compiled programs it process are 100 per cent machine code, so they run very fast (certainly much faster than compiled AMOS code).

All *Blitz* programs have to be compiled before they can be run, so in this respect, *Blitz* is not a BASIC interpreter like *AMOS*. However, this isn't necessarily a bad thing. After all, if you buy *Blitz Basic 2*, you get everything you need to produce standalone code, so you don't have to spend any more of your hard-earned cash on a separate compiler.

The Blitz language is a very powerful BASIC-like command set that borrows more than a few tricks from other languages. Along with the usual BASIC functions, procedures and constructs such as IF...THEN, WHILE...WEND and SELECT...CASE (a very useful construct that still hasn't been included in *AMOS*) have been added. *Blitz* also borrows the 'C' programming language's powerful 'Data structures' facility.

For those of you reading this who are unaware of these potentially awe-inspiring variable types, what they allow you to do is to group a set of variables under a common heading so that a single variable (a structure) can hold many different items of information in a variety of different formats.

This may not sound particularly useful if you're more used to BASIC, but anyone who programs the Amiga's operating system will tell you how important they really are. Because virtually every operating system routine expects to be fed parameters as data structures, *Blitz* is an ideal vehicle for programmers who wish to access the Amiga ROM routines without having to resort to C.

The real power of *Blitz Basic 2*, and the reason why most Amiga programmers will buy it, is its ability to directly access the Amiga's hardware in a similar manner to the way *AMOS* does. What this basically means is that *Blitz* programmers can open screens, scroll smoothly and even make use of double buffering and dual playfield screens without the sort of system overheads normally associated with operating system coding. What's

INTUITION BLITZ'ED!
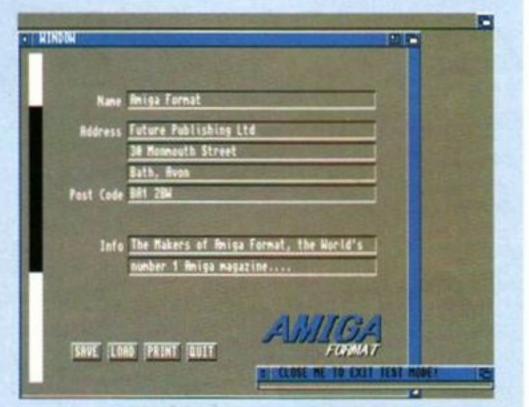
Unlike *AMOS*, *Blitz* programs can make full use of Intuition, the Amiga's windows environment. This means you can readily open screens and windows complete with gadgets and pull-down menus, just like a conventional BASIC language such as HiSoft BASIC. To make the task of designing Intuition-based frontends simpler, Acid have also included a very useful 'Intuition Planner' that allows you to design your frontend (complete with a whole range of gadget types including string, proportional and boolean) without having to mess around with complicated commands.

The only real problem with the Intuition Planner is the fact that it's not really designed for Workbench 2 or 3, so you can't make use of the new 'cycle' or 'radio' gadgets recently added to Intuition. But you can use them through the language itself. Considering Acid seem to release an update every couple of weeks, I'm sure this will be addressed soon.

Blitz's Intuition Planner allows you to design frontends without having to dirty your hands with coding.

more, because *Blitz* compiles into 100 per cent machine code, all this hardware jiggery-pokery is achieved at tremendous speed. Hardware scrolling, for example, can be done faster than the Amiga's screen redraw hardware can actually handle!

The current release of *Blitz Basic 2* (version 1.6) isn't fully AGA compatible, but you can choose from the AGA chip set's palette of 16.7 million colours when setting up palettes. Also, when programming under Intuition, you can access a number of AGA screen modes including SuperHiRes. *Blitz*'s makers, Acid Software, claim that a fully AGA-compatible version of *Blitz* will be with us soon, allowing 256 and even 262,000 colour screens to be opened in *Blitz* (hardware level) mode. If Acid hurry up and get the AGA version of *Blitz* out on the streets, they will beat Europress, who still claim that the AGA version of *AMOS Professional* is a few months away. Coupled with *Blitz*'s impressive performance, it should be possible to produce some pretty impressive AGA games that compare very favourably with their commercial counterparts.
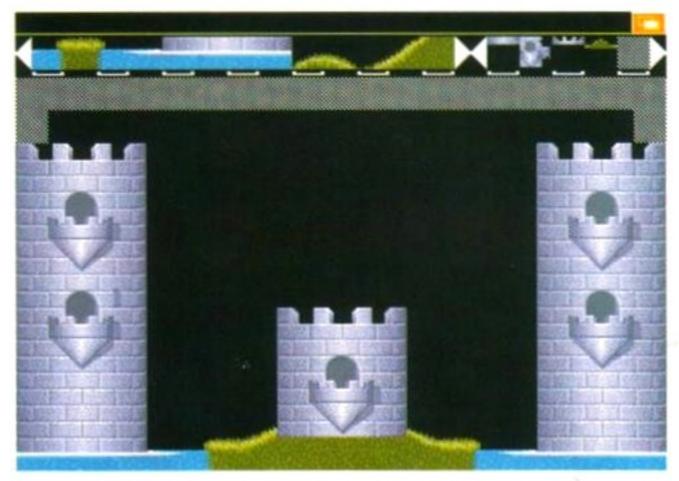
Blitz's blitter object and sprite handling capabilities are very impressive too. For anyone who has had to suffer the rather slow sprite and bob update speeds of *AMOS* games, seeing *Blitz* literally hurling bobs around the screen comes as something of a culture shock. Like *AMOS*, *Blitz* can display up to eight hardware sprites on-screen simultaneously and as many 'Shapes' (Bobs) as memory will allow. *Blitz*'s handling of Bobs is particularly powerful, allowing almost direct control over the blitter.

However, unlike *AMOS*, *Blitz* does not include an object editor for designing bobs and sprites, so you need to either cut rectangular blocks from an IFF image using the included *ShapeMaker* utility, or you have to do the whole thing manually from within your program. *ShapeMaker* would be a good alternative if it gave more control over the cutting process. As it is, it isn't even documented, so you are left to try and work out how to use it for yourself!
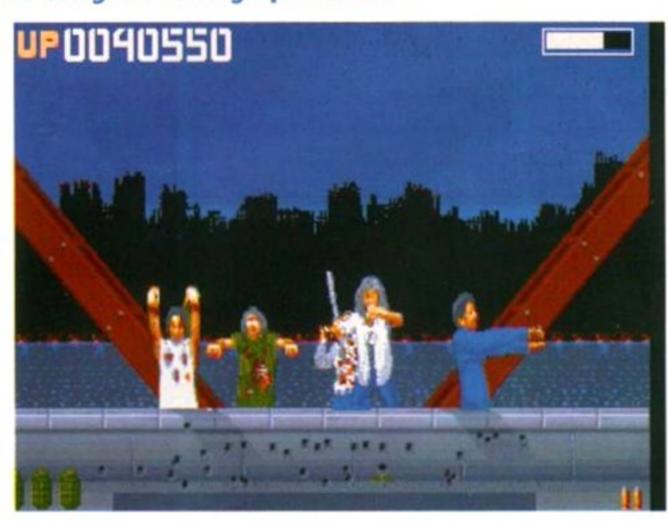
Obviously it would be impossible to cover every aspect of the *Blitz* command set within such limited space, simply because the *Blitz* language is so large and covers so many different aspects of Amiga programming. You can, for example, load and play (even directly from disk) IFF sound samples and *SoundTracker* modules (which are played under interrupt), load and save screens in IFF format, set-up your own interrupts and so much more besides. Some aspects of the language are somewhat over complicated, but then perhaps I'm spoilt by *AMOS*'s blindingly obvious command set.

Once you've written a section of code, only to find that it doesn't run quite how it should (that is, it crashes the machine), *Blitz* includes a very handy runtime source level debugger that is considerably more powerful, and easier to use, than the 'Monitor' built into *AMOS Professional*. The debugger – similar to *Devpac*'s 'MonAm' – allows you to single
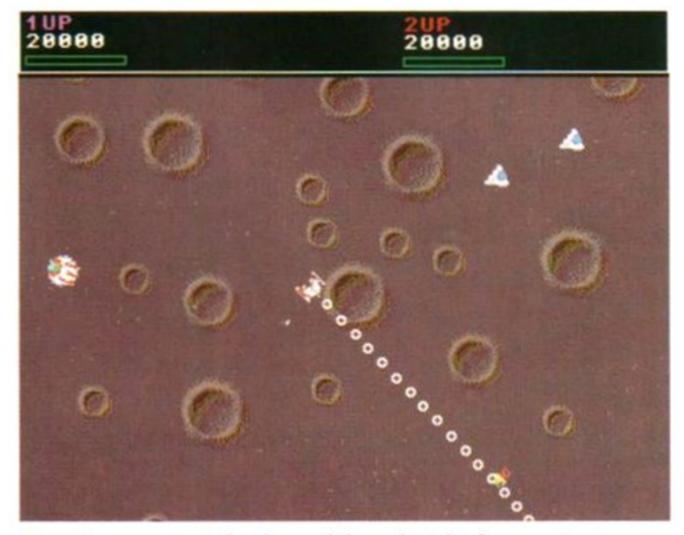
Blitz is the biz...

The *Blitz* Map Editor can be used to construct screens from small graphic blocks. Using the map editor instead of drawing the screens in a conventional paint program can save the programmer a lot of memory, since large areas of the screen can be drawn by re-using the same graphic block.

Zombie Apocalypse is just one of many games bundled with *Blitz Basic 2*. Boasting excellent graphics, superb sonics and some wicked gameplay, it bides well for *Blitz* programming.

BuzzBar may not look exciting, but it demonstrates how *Blitz*'s scrolling capabilities are far superior to those of AMOS. *Blitz* can scroll screens larger than the display, and when dual playfield mode is used two sections of the screen can be scrolled independently.
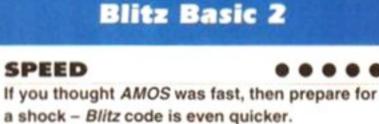
step through your code and see exactly what each command does, making the process of debugging *Blitz* code that bit easier. Full marks to Acid for this feature.

There's no doubting that *Blitz Basic 2* is a very powerful language which is capable of producing games and even applications software of commercial quality. This has been said of *AMOS*, but anyone who has tried to market an *AMOS* game will know that this isn't strictly true. Software houses are notoriously snobbish towards games written using so called 'game creators', but there's no way that they would be able to tell the difference between a well-written *Blitz* game and its Assembler equivalent. *Blitz* code runs so fast that I no longer see any reason why any budding games programmer would ever want to learn Assembler.

Blitz Basic isn't for everyone, though. If you're a fairly experienced coder who can easily grasp difficult and often complicated concepts, then give *Blitz* a whirl. For beginners and those who like their coding straightforward and logical, *AMOS* is still the choice. I certainly won't be ditching my copy of *AMOS Professional* quite yet, simply because *AMOS* is still so much easier to program under. It may not have the raw speed of *Blitz*, but it more than makes up for this in ease of use.

The only real fly in the ointment is the documentation that is supplied. Despite the brilliant software, *Blitz* is really let down by some rather lousy manuals that make the process of learning this programming language a real nightmare. The actual software is definitely Format Gold material, but the documentation most certainly is not. If Acid were to to produce a set of manuals that were in the same league as the excellent manuals which Europress produce for their *AMOS* language, I would have no hesitation in awarding *Blitz Basic 2* a Format Gold. As it is though, *Blitz* falls short.

However, if you're adventurous enough to fight through the dreadful manuals, then you will find *Blitz Basic 2* a very powerful language that, in terms of raw performance, leaves *AMOS* for dead. AF

Blitz Basic 2

SPEED ●●●●●
If you thought *AMOS* was fast, then prepare for a shock – *Blitz* code is even quicker.

DOCUMENTATION ●●
Few of the commands are given the sort of in-depth coverage they deserve.

ACCESSIBILITY ●●●
Beginners may find *Blitz* rather heavy going – a better manual would definitely have helped.

FEATURES ●●●●
Blitz's command set covers both *AMOS*-like screens, bobs, etc, plus full Intuition support.

VALUE ●●●●
With its built in compiler, *Blitz* represents very good value for money.
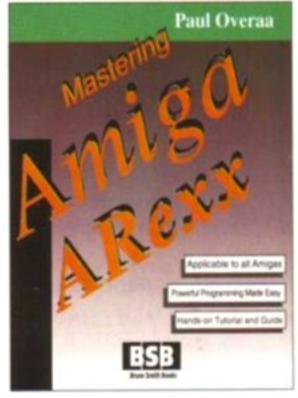
Verdict **87%**

Computer painting with a soap-on-a-rope is dead. Long live pressure sensitive tablets (and cordless pens).
Brian Larkman explores....
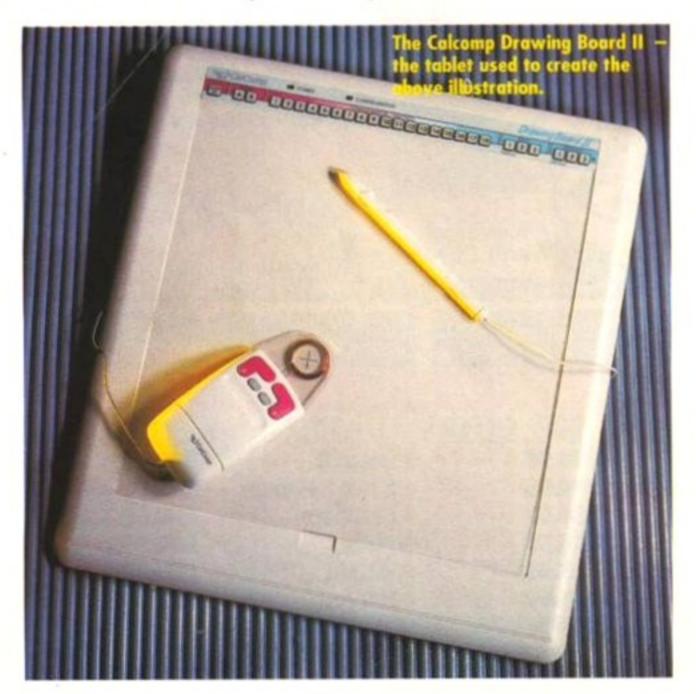
Pressure sensitive painting

US COMPUTER ART enthusiasts can rave about 'pixel painting' till we are red, green or blue in the face, but put a real artist in front of a screen and shove a mouse in their hand and they will just laugh. "Produce a sensitive piece of artwork with this handful of plastic? I'd sooner cut my ear off!" Mind you, we have come a long way since the original *Deluxe Paint*. The latest versions of *DPaint*, *OpalPaint*, and *TVPaint* all boast attempts at natural techniques – tints, airbrush effects, textured surfaces, even simulated watercolours. Examine even the simplest mark made by a natural material like a pencil or crayon though, and you can see the fundamental flaw in the computer version – lack of variability. The natural mark varies in width and density of colour along its length. It is this variation of line quality – the hierarchy of line – that gives a drawing its sensitivity and enables the artist to represent the subtle nuances of light and form with what seems to be a simple mark.

The solution to this problem – a pressure

The high degree of sensitivity attained even with the Calcomp tablet is evident in these images produced by Chris Serbert using *OpalPaint* and an A4000.

The Calcomp Drawing Board II – the tablet used to create the above illustration.

sensitive tablet with cordless stylus – has been available for several years on the Mac, supported by many software packages. Now, at last, the Amiga also has software that will support the most common tablets from Wacom, and a more recent arrival from Calcomp.

Drawing (or 'digitising') tablets have been around on the Amiga for some years. Mostly, they are of use only to those who want really precise, absolute means of transferring information from paper to computer – these include engineers, architects and graphic artists. As an ordinary input device the 'puck and tablet' combination normally used is too precise and far too expensive for everyday use. A radical change in the use of tablets came about when the Japanese company Wacom developed a cordless 'stylus' (a bit like an inkless felt pen) that had a pressure sensitive nib. With this device, variations of hand pressure transmit signals to the program that can be interpreted as changes of
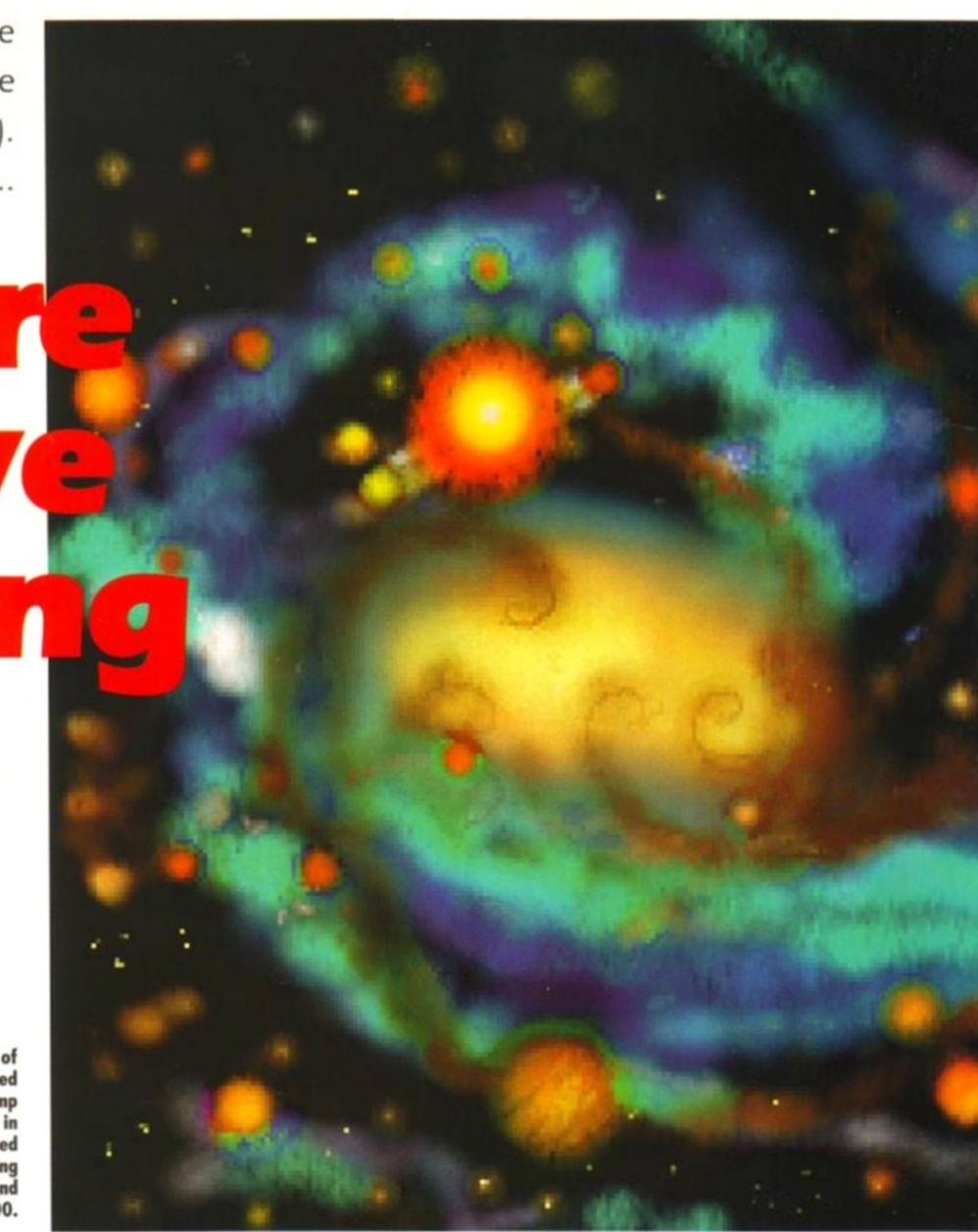
> **"** ...variation of line quality – the hierarchy of line – gives a drawing its sensitivity and the subtle nuances of light and form. **"**

thickness of line, or density of colour. Natural marks are the result.

Three main packages support pressure sensitivity – *DPaint AGA*, *OpalPaint* and *TVPaint* – and they can all be used with a Wacom tablet. Computers Unlimited, the British distributors, were reluctant to lend us one, so until their German head office can supply us, this subject is the province of the other main system from Calcomp. Drawing Board II is a standard 12 or 18-inch digitising tablet that comes with the traditional four-button 'puck' as well as a cordless stylus. The driver software for the Amiga has been developed by TriMedia in California and enables any program – including Workbench – to use the stylus for normal operations (left mouse button simulated by the pressure tip, right mouse button by the push switch on the side of the pen). The set-up program enables parameters such as click pressure, draw pressure, sensitivity, drawing area, scaling, and so on to be adjusted.

EFFORTLESS EFFECTS FROM WACOM TABLET

TVPAINT

SNOW SCENE
The late arrival of the SD420E digitiser from Wacom has really put the fox into the hen-house! A brief play with it on an A4000 running *OpalPaint* and a couple of hours with *TVPaint* are not enough for a full review but even in that short time it is obviously superior. The main difference is in the feel of the pen. It has no batteries so it is much lighter and better balanced than the Calcomp pen. The pressure nib has a longer travel and a progressive feel that gives a wonderful controllable variation in the flow of ink. Just resting on the tablet surface an extremely fine cloud of colour can be produced and slightly applying pressure very gradually increases the density or width of line. Superb! This image rushed out as a test does little justice to the sensitivity and natural feel of this device. I never want to part with it!

TVPAINT

HIERARCHY OF LINE
A 'natural' looking mark varies in width and density of colour along its length. It is this variation or 'hierarchy of line' that gives a drawing its sensitivity allowing an artist to represent form in a simple way. The drawings shown here were all produced on an Amiga, but some were with, and some without, pressure sensitivity. Hopefully the difference will be obvious. The minimum thickness of the lines is vitally important. In some places, a line will seem to disappear because the object it is outlining ceases to have any contrast from its background. Look at any normal household object and observe this in life. If you run your eye around the form of the object you will see that some sections stand out in much greater contrast than others. A similar effect will take place depending on the direction of light on to the object.

At present, only *DPaint* and *OpalPaint* provide proper pressure sensitive tools that work with the Calcomp board, so we shall focus on those. Two versions of *DPaint AGA* will work with a pressure stylus: version 4.5 and version 4.6. The common version is 4.5, but there are some problems with the brush, which seems to stick at the end of its stroke, and also with the smoothness of operation. At present, version 4.6 is not widely available in Europe, so if you need it, contact Electronic Arts (tel: 0753 549442). They should also be able to supply the TriMedia driver software. The obvious improvements in *DPaint* 4.6 (including shared image buffers with *ADPro*) make using pressure sensitive tools a more realistic option. The results and techniques involved can be seen in the accompanying illustrations. Nevertheless, there are still some problems, though these can be mostly overcome by modifying your drawing style.

The main limitation is that pressure sensitive operations only work if the brush size is larger than one pixel. This seems to be an inherent quirk of the Amiga or a common software

Continued overleaf

DPAINT 4 AGA

LANDSCAPE
Once you get used to them, the tablet and pressure stylus become second nature and the evidence of their use becomes quite subtle. This image would have looked a lot less natural, and would have taken much longer to produce using a mouse.

mistake because it applies to *OpalPaint* as well as *DPaint*, and seems to prevent normal operations such as transparency from working with a single-pixel brush on the standard system as well. In lo-res mode, the four-pixel brush you are forced to use is just too large for any sort of detailed, sensitive work you may want to do. One way to get around this problem is to use a single-pixel custom brush and colour mode. This, however, only works with pressure variable transparency and not variable brush size.
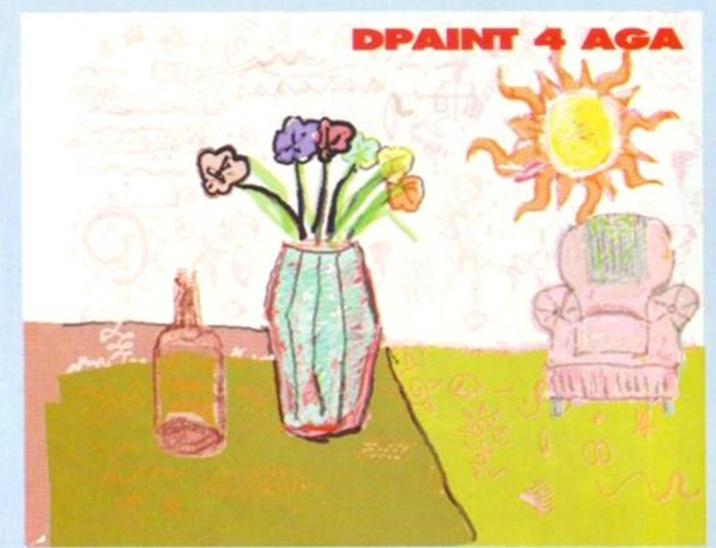
This limitation also applies to the use of the airbrush tool – transparency only, and even then, still not with a single-pixel brush. On AGA machines in hi-res 8-bit modes, a larger brush is not a great problem (though there is amazingly no standard four-pixel brush in hi-res). Other Amigas however, forced to use lo-res for HAM modes, lack the ability to produce fine 'textured' pencil lines – a great pity. Suprisingly, *OpalVision* and *OpalPaint* suffer from a similar limitation because, even using an A4000/40, hi-res 640 x 512 painting operations slow down to unacceptable levels when the Calcomp board is used with artistic effects such as pencil. Something has to be wrong here. Even an 030-based Mac can manage fast, textured pencil-drawing effects, so why can't an 040 Amiga? Wake up Amiga users! Demand your rights to decent natural-effect drawing materials.

No less annoying, is that the monitor may well interfere with the smooth running of the tablet. This is an easy problem to solve and it will help to work with the tablet on your lap away from the screen or, alternatively, move the monitor no less than 18 inches away from the tablet.

Apart from the curious exclusion of single-pixel brushes, most of the problems with natural drawing tools and pressure sensitivity are caused by lack of speed. Natural effects undoubtedly tax the system to the limit, requiring lots of on-screen colours (at least 8-bit), high resolution, and fast processing. What it all means, unfortunately, is that you need a minimum of an AGA or graphics-card-equipped Amiga to be able to use natural materials properly. That said, the illustrations here show that even in low resolutions some great effects can be obtained provided that you are content to work with great sweeps of colour rather than in a more detailed manner. The easiest and most effective style is watercolour, especially with *DPaint*. The variations of transparency and brush thickness certainly go a long way to simulating some very realistic watercolour effects.

OpalPaint is something else. Obviously, the use of textured 'paper', effective blending, a decent chalk/charcoal material, and especially a realistic airbrush, make a huge difference to the end results you can achieve. Unfortunately, this makes it all the more frustrating that it cannot cope with a higher resolution. For its range of materials and textures, *OpalPaint* is probably the best package to use in order to get a 'natural' effect with a pressure stylus; the ability to use 8-bit colour at high resolution, however, qualifies *DPaint AGA* as a very close second. **Æ**

CALCOMP DIGITISER DOODLES

DPAINT 4 AGA

DPAINT 4 AGA

DPAINT 4 AGA
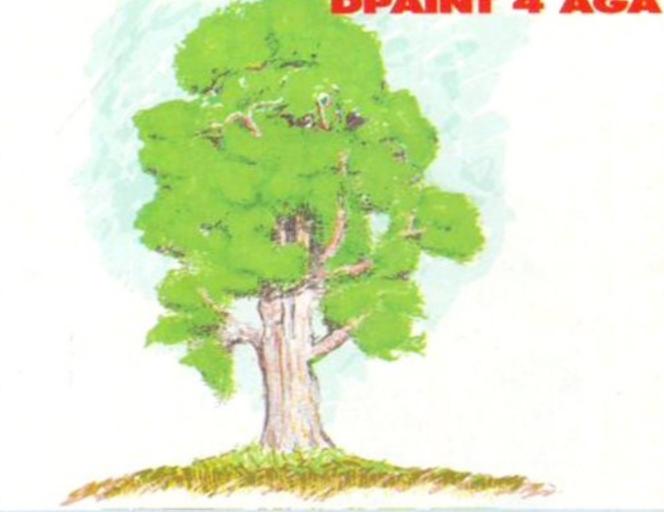
LINE THICKNESS
The stripes on the jug illustrate perfectly the fluid variation of the thickness of lines that should be possible. In practice, this is actually quite difficult to do with the Calcomp tablet. In most cases, the variation of thickness jumped from thin to thick in stages giving a stepped look.

TRANSLUCENCY
This rather weird jug was evolved from an abstract doodle and indicates the minimum line thickness available. This is really too thick for simulating pencil lines but works reasonably well for brushed water-colour lines. The flowers, curtains and wall pattern show the degree of translucency that can be achieved with *DPaint* 4. This is available to anyone with or without a pressure stylus system.

VARIABLE TRANSLUCENCY
With the pressure setting on translucency without variation of size, it is possible to build up depth using just one paint colour but variable washes. The sky, trunk and especially the foliage show this effect.

If you have bought a new AGA Amiga, but still have a standard monitor, you won't be able to see the new super hi-res modes. But **Richard Baguley** can because he's been reviewing some colourful new models that ...

Get the whole picture...
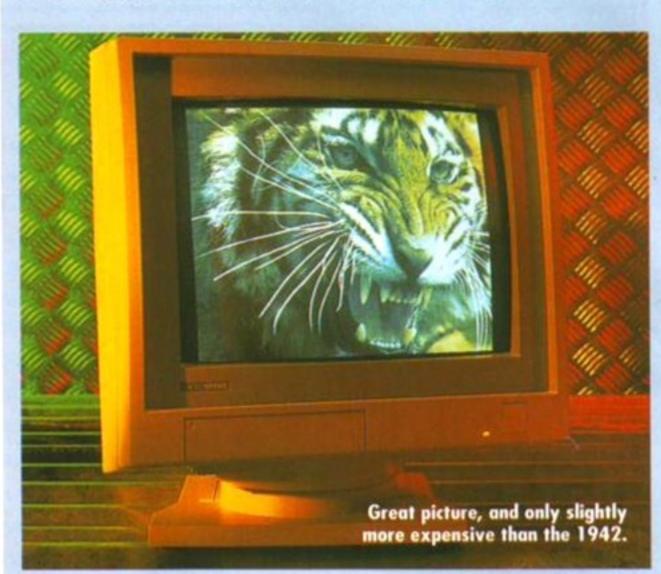
A MONITOR IS your window in to the world of the Amiga, so it's important to make sure that you get the best possible view. If your view is distorted, lacking in colour and flickery, it's going to affect your work and enjoyment, whether it's ray tracing your latest masterpiece, or blasting away at enemy tanks in *Gunship 2000*.

Until recently the standard monitors were the Commodore 1084 and the Philips CM8833 Mk II. However, with the advent of the new AGA chip set, matters have become more complex. An A500 will only output its video signal at a frequency of 15.5Khz, whatever
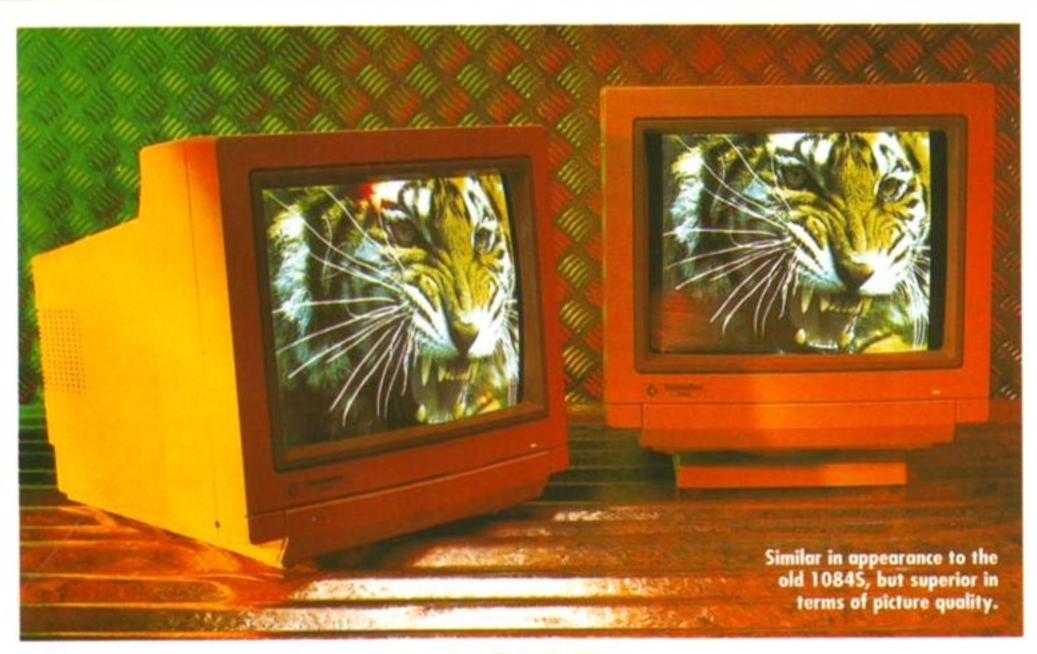
mode it's in, but the new A1200 and A4000 use a variety of frequencies, which can be controlled by the new software drivers included with Workbench 2 and 3. So, if you want to use all of the monitor modes, you will need a new monitor. And the one that you need is a multisync, since it is capable of synchronising to a range of frequencies. Commodore have previously produced their own multisync, the 1960, but the image quality left something to be desired. They now have two new impressive dual sync monitors, that are oozing with super hi-res colour. Which is the best one for you? We tell you on these pages... **AF**

Microvitec

Great picture, and only slightly more expensive than the 1942.

Microvitec's new model is based on a 14-inch tube, although a larger 20-inch model is available. It's well designed, with a minimal frontage and all the controls hidden behind a flap on the front. At the rear of the monitor is a 15-way D-SUB connector, and a lead with a 15-pin SVGA type plug is supplied. If you want to use it on an A1200, you'll need to use a Commodore adaptor.

Similar in appearance to the old 1084S, but superior in terms of picture quality.

Commodore 1942

Strictly speaking, this monitor shouldn't be called a multisync, because it is in fact a dual sync, which means it can display signals in two narrow frequency ranges (15.5 to 15.8 Khz and 27.31 to 31.5 Khz), so all of the new AGA and non-flicker high resolution modes can be used.

The 1942 is based on a 14-inch picture tube, with a 0.28mm dot pitch (the size of the dots of phosphor which form the picture). Two stereo speakers are built in on either side of the tube. Also included is a tilt and swivel stand. All the controls are under a panel at the front, like the 1084S, but there are three new controls for vertical size, shift

and overscan. The overscan button stretches the image horizontally, and allows you to use the full width of the tube, with no black borders. The video cable is permanently fitted to the monitor, and has a 15-way SVGA type plug on the end. An adapter to fit this to the 23-pin video socket is supplied.

The overall impression is good, with strong colours and even in super hi-res mode the colours are strong and bright. The sound is OK, but not outstanding. Frankly, if sound is important, you will be better off getting a pair of external speakers.

The only irritation is the vertical height of the screen in different modes. If you switch between

NO DISK WITH YOUR 1940 OR 1942?

If you've bought a 1940 or 1942 monitor , you may not realise that you should have got a disk with a selection of new screen drivers with it. If you didn't get this disk, contact your supplier immediately. They should receive stocks from Commodore over the next few weeks, and should supply this disk to you.

modes, or have a hi-res Workbench and a lo-res *DPaint* screen running, switching between them requires an adjustment to the vertical height of the screen. However, this problem is not just confined to the 1942, but is a general problem with most multisyncs. The overscan width of some of the modes also leaves something to be desired, but this is alleviated to a degree by the new monitor devices which are included on a disk with the monitors.

Commodore 1942

CONSTRUCTION ● ● ● ●
Solid and well built. Should stand up to plenty of bangs and knocks.

PICTURE QUALITY ● ● ● ●
None of the convergence or purity problems that marred the 1084S.

SOUND QUALITY ● ● ●
Not brilliant quality, but it's pretty loud. Good enough to lay games with.

VALUE ● ● ● ●
Cheaper than a full multisync, and it's the lowest priced we've reviewed here.

Verdict **88%**

Image quality is good, although the tube on the review model is slightly out of line, resulting in a picture which tilts to the left. The colour saturation is fine, and apart from a very slight problem with pin cushioning (where the image doesn't form a perfect rectangle, but is slightly thinner in the middle than at the top and bottom), the overall image quality is excellent. It is more expensive than Commodore's new offerings, but if you need the flexibility of a true multi-sync, this is one of the better ones available.

Microvitec	
CONSTRUCTION	● ● ●
Solidly built but without any real flair. Simple but pleasant design.	
PICTURE QUALITY	● ● ● ●
The overall image is pretty good, but there is a slight problem with pincushioning.	
FEATURES	● ● ●
A good, solid monitor with no real bells or whistles, just a decent picture.	
VALUE	● ● ●
A true Multisync, and only slightly more expensive than Commodore's latest offering.	

Verdict **75%**

Commodore 1940

Silica ■ 081-309 1111 ■ £299

This looks almost identical to the 1942, and the only difference is in the picture tube, which has a 0.39mm dot pitch. Apart from this, the 1940 is completely identical to the 1942, so all of the comments about the 1942 apply to this as well (with the exception of the picture quality).

The larger dot pitch (the phosphorus dots which make up the image are bigger) of the picture tube means that the colours are not quite as strong, and the picture isn't as sharp when you're working in super high resolution mode. However, it's still usable, but colours that should look strong end up looking rather weak.

Commodore 1940	
CONSTRUCTION	● ● ● ●
Exactly the same as the 1942, in that it looks exactly like a 1084 (if you see what I mean).	
PICTURE QUALITY	● ● ●
Colours are not as strong as the 1942, and hi-res screens look less sharp.	
SOUND QUALITY	● ● ●
As with the 1942, sound quality is pretty good, plus it's nice and loud.	
VALUE	● ● ● ●
Obviously aimed more at the gameplaying market, so fairly reasonably priced.	
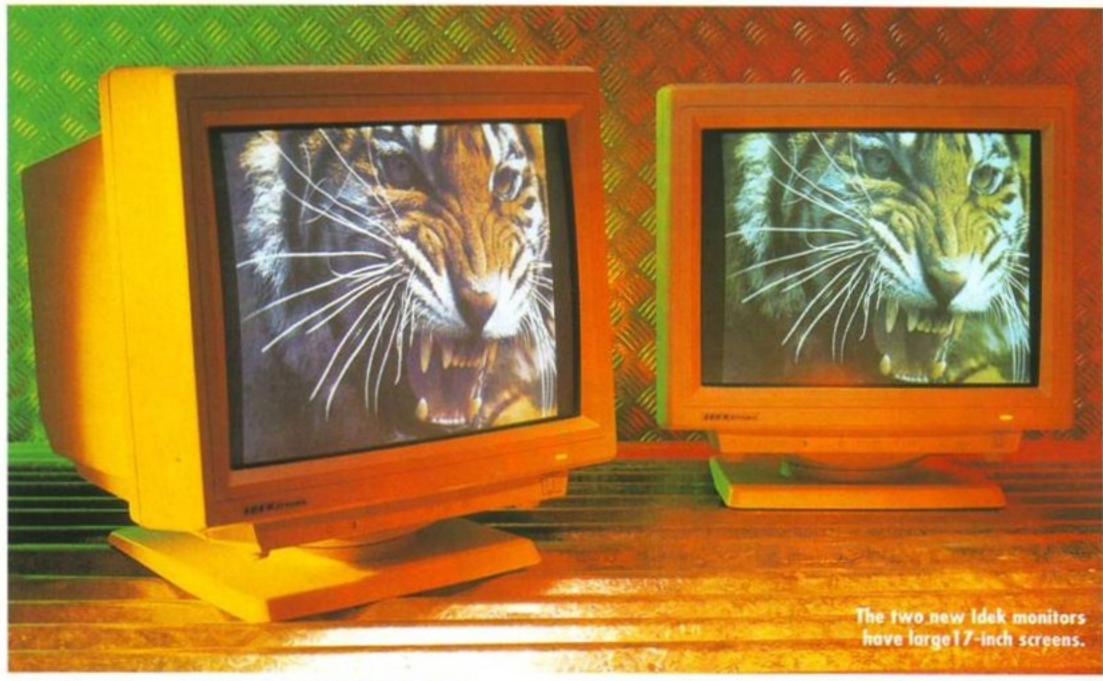
Verdict **88%**

The two new Idek monitors have large 17-inch screens.

Idek MF-5317

Iiyama UK ■ 0438 745482 ■ £750.82

This monitor is big in more ways than one, it has a massive 17-inch screen, which is flatter and squarer than most others. On the back is the usual D-SUB 15-pin connector, and a lead with a high density 15-pin D type SVGA plug.

Regrettably, this monitor will not sync down to the standard Amiga frequency of 15.5Khz, since it can only display signals in the range of 30 to 65Khz (horizontal). This means that on an A1200 or A4000 the only mode it will work in is Productivity, which isn't much use to anybody. However, it works in all modes on an A3000, or any other model fitted with a hardware flicker fixer. This is a real pity, because it's a great monitor.

The picture quality is excellent. The flatter, squarer tube has hardly any curvature, and consequently the image is extremely good. The colours are bright, and the image is solid. Playing a game like *Gunship 2000* or *Syndicate* on this with a pair of loud external speakers is something that has to be experienced to be believed, although it's unlikely you would buy it exclusively for this purpose.

This is an excellent monitor, but it's not cheap, and it's inability to cope with any machine apart from an A3000 or a flicker fixer equipped model means that it's somewhat limited in its appeal. However, if you're looking for a really professional large monitor for use with an A3000, this is well worth looking at.

MF - 5371	
CONSTRUCTION	● ● ● ●
Well built, and extremely heavy. In comparison to the size of the tube, the frontage of the monitor is pretty small.	
PICTURE QUALITY	● ● ● ●
Excellent, with good colours and no edge distortion. Playing games on such a large screen adds another dimension.	
FEATURES	● ● ● ●
Won't cope with any modes apart from productivity without the help of a flicker fixer, which rather limits its potential.	
VALUE	● ● ●
Not cheap, but if you want the best, you have to pay for it. Only really suitable for use on an A3000.	

Verdict **78%**

Idek MF-5017A

Iiyama UK ■ 0483 745482 ■ £853

Idek's other offering also has a large 17-inch screen, with a 0.31mm dot pitch and the same style of flatter squarer tube that you get with the MF-5317.

The review model has a long persistence screen, which means that when a dot of phosphor is illuminated on the screen by the electron beam, it takes far longer to fade than on other monitors. The idea behind this is that it makes high resolution modes much easier to use, and it's particularly useful for running desktop publishing programs because the screen does not flicker. This means that the monitor is very suitable for use with programs such as *Professional Page*, *PageStream* or *Saxon Publisher*. Even running in super hi-res mode, the display is very solid and easy on the eye, and it runs in all of the new AGA modes with no problem.

The only problem with this monitor are the colours. They are very flat, and severely lacking in contrast. This is caused by the long persistence picture tube, and it's rather irritating. A test card image looks very pale and uninteresting, and subtle shades of colour tend to get lost in each other. However, you wouldn't buy this sort of monitor for its colour, and it's not a great problem if you're working in DTP. The long persistence also makes interlace bearable if you're working in one of the super-hi res modes for long periods.

Idek MF-5017A	
CONSTRUCTION	● ● ● ●
Nicely designed and well built, and can cope with a good variety of video signals.	
PICTURE QUALITY	● ●
The colour is extremely disappointing, but the long persistence effect is useful for hi-res DTP work.	
FEATURES	● ● ● ●
Three switchable inputs could be useful if you have got several machines.	
VALUE	● ● ●
Again it's expensive, but it's not an unreasonable price for a monitor of this size.	

Verdict **78%**

Fitting a 32-bit RAM expansion to your A1200 will increase its memory capacity, and double its speed too! **Jason Holborn** takes a look at the current contenders.

Memory Matters!

LAST YEAR, WHEN Commodore launched the A1200 with its massive 2Mb, Amiga watchers worldwide were relieved to finally see a machine with a respectable amount of RAM. Users more accustomed to 1Mb (or even 512K) were treated to a machine with an almost elephant-like memory.

However, most of us soon realised that perhaps 2Mb wasn't quite enough after all. Whereas previous machines could have got on quite nicely with just 2Mb, the A1200 with its AGA chip set proved to be far more memory-hungry than its predecessors.

Considering the popularity of the machine, RAM expansions designed specifically for the A1200 have been slow to arrive. Many users wanting to expand the memory of their machines resorted to PCMCIA-based expansions only to find they didn't work fast enough under the A1200's 32-bit architecture. Due to the nature of PCMCIA, all expansions that use this route are 16-bit only, causing terrible bottlenecks which results in a reduction in system performance. PCMCIA expansions may initially seem inexpensive, but fitting a PCMCIA RAM expansion to an A1200 is like driving a Ferrari Testarossa in first gear with the handbreak on!

Now that developers have caught up with Commodore, a range of dedicated A1200 RAM expansions have been launched that allow the machine to run at its full potential. Because these expansions use true 32-bit RAM, they complement the A1200's 32-bit architecture beautifully. What's more, fitting a 32-bit expansion to an A1200 will not only increase the amount of free RAM available, but it will even increase the performance of your machine. Power Computing's PC1204, for example, more than doubles the speed of the A1200! This is perhaps the first time ever that pure RAM expansions have dramatically improved the performance of a computer!

To further increase the speed of your A1200, many of the boards in this test also have space for a maths co-processor chip (FPU), a special chip designed to handle the complex calculations needed for ray tracing, morphing, image processing, CAD and desktop publishing. If you really want to see your A1200 fly, an FPU provides an inexpensive way of putting your A1200 into top gear! AF

More power and more memory is at hand from the true 32-bit RAM expansion cards which complement the A1200's 32-bit architecture beautifully.

Blizzard 1200

£169 ■ New Horizon Computers ■ 0989 750260
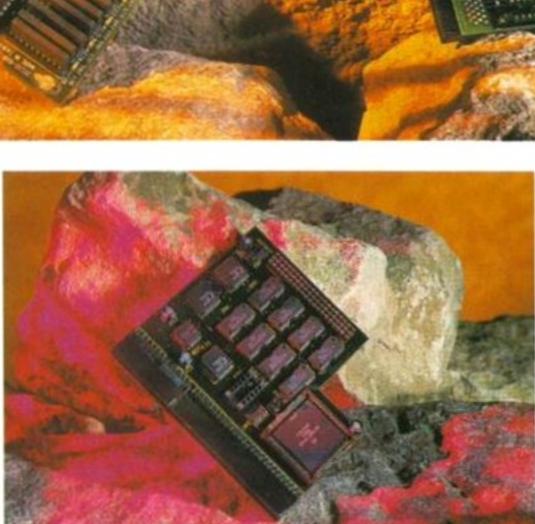
New Horizons' Blizzard 1200 is designed and built in Germany by Phase 5 Digital Products, a company better known for its range of extended trapdoor RAM expansions for the A500. Unlike the rest of the boards on test, the Blizzard card is the only RAM expansion on test that uses SMT (Surface Mount Technology) throughout. Although a fairly minor point from a performance point of view, this does allow the Blizzard card to be considerably smaller than all of its competitors. Believe it or not, this little beauty is about the same size as a 512K RAM expansion for an A500 – a pretty impressive achievement when you consider that the Blizzard card offers eight times more RAM than an 512K expansion!

Although the basic Blizzard card offers only 4Mb of RAM (once again, all of which is surface mounted), an optional extension card is available for £149 that adds a further 4Mb of 32-bit expansion RAM to the board. This brings the total up to a full 8Mb – more than enough for even the most demanding of tasks including morphing and 24-bit scanning.

The review sample we tested didn't have a battery-backed clock, but New Horizon Computers assure me that all Blizzard 1200 boards sold after the June 30 will have a clock facility fitted as standard. Whether this will affect the card's size is unclear, but it seems unlikely.

Like the Power PC1204 card, the Blizzard card can also accept a maths co-processor rated up to 50MHz via a standard A4000/030-like PLCC socket.

The Blizzard 1200 board is an absolutely brilliant little RAM expansion at an astonishing price. However, the best news is that later this year New Horizon Computers will be launching a 40MHz '030 accelerator for the A1200 complete with 4Mb of 32-bit RAM (expandable to 32Mb via SIMM modules). New Horizon say that anyone who buys the current Blizzard RAM expansion card will be able to trade it in, getting the full £169 they paid for it, when they upgrade to this new board complete with the 40MHz '030 and 4Mb of RAM.
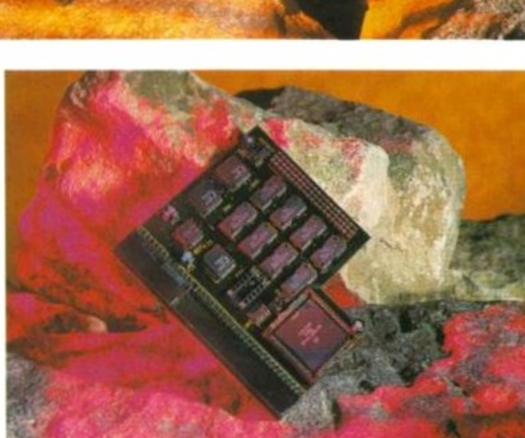
Surface Mount Technology means the Blizzard 1200 can be small in size, but still compete with the best in the power stakes.
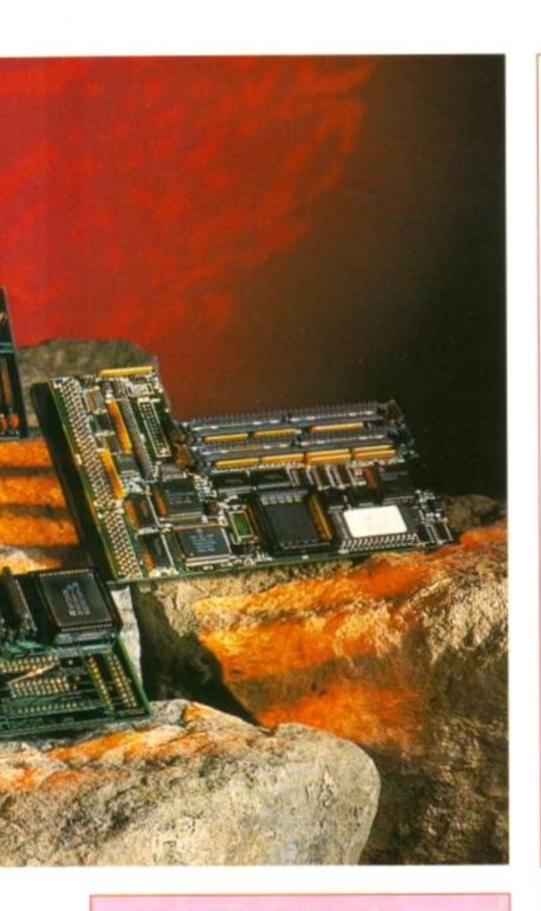
AMIGA GOLD FORMAT 93%

HOW TO FIT AN FPU TO AN A1200 RAM CARD

All of the RAM expansion cards in this feature have a socket for a FPU (Floating Point Unit), providing the software you use has been written specifically to take advantage of the chip. Because the socket is already fitted, all you need is the chip itself and a timing crystal. It won't involve any soldering or other potentially nasty operations.

The first thing to decide is what speed of chip to use. Although it's possible to fit a speedy 50Mhz 68882 FPU to most of the cards, there's relatively little point. This is because the A1200's 68020 CPU can't feed the floating point sums to the FPU fast enough to take advantage of the speed increase you get by using the faster chip. Realistically, you can achieve the best speed increase for the smallest outlay with a 25Mhz chip. Most of the cards have a standard PLCC socket,
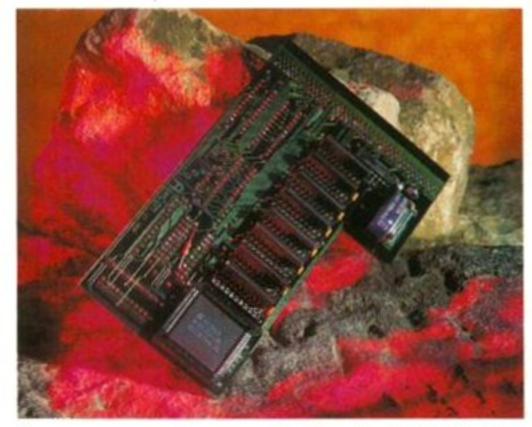
AX128

£199 ■ Ashcom ■ 0530 411485

Riding in from the flank comes Ashcom with its AX128 board, a trapdoor-fitting RAM expansion capable of handling up to 8Mb of 32-bit RAM. Ashcom is well known for its fine range of RAM expansions for the A500 and A600 and the AX128 continues their tradition of bringing high capacity low-cost RAM expansions to the masses. The AX128 uses the same 32-bit ZIP chips as the Power Computing board and, as standard, it comes equipped with 4Mb. A further 4Mb can be added directly on to the board simply by purchasing additional ZIP chips. Alternatively, Ashcom can supply a fully populated board (8Mb) for an extra £100.

Surprisingly, the Ashcom card doesn't provide a socket for a maths co-processor. Although most users don't initially want FPUs, it's always wise to go for a board that offers an FPU option in case you need one at a later stage – most Amiga users who buy their computers just for playing games eventually end up using them for more creative uses. If you buy this card and then get hooked on ray tracing, morphing or fractals, you will kick yourself for not buying a card capable of handling an FPU. Thankfully it does have a real time clock.

The Ashcom card may not be the cheapest 4Mb RAM expansion available for the A1200, but it is certainly cost effective if you buy it in its 8Mb guise.

If you use memory hungry applications, the AX128's lack of an maths co-processor might not be the best buy for you.

Indeed, although the Blizzard 1200 is initially cheaper to buy, the AX128 is about £20 cheaper than an 8Mb Blizzard. Bear this in mind when you are making your buying decision.

Verdict **82%**

MAKING ROOM FOR YOUR RAM

If you intend to buy an A1200 memory expansion that offers more than 4Mb of 32-bit RAM, bear in mind that any extra memory you add lives in the same address space as the A1200's PCMCIA slot memory. You cannot, therefore, connect a 32-bit RAM expansion larger than 4Mb and a PCMCIA memory expansion simultaneously.

Power Computing have announced that they plan to launch a new version of the PC1204 that overcomes this problem. Using industry standard SIMM modules (the same type of chips used by both the MBX and GVP boards), the new board will be able to address up to 32Mb of 32-bit RAM and will stay fully compatible with any PCMCIA cards connected to the machine.

so all you need to do is to plug the FPU chip into this. It's as easy as fitting an extra RAM chip to the card.

As well as the FPU chip, you will also need a timing crystal, which supplies a signal to the chip which it uses for timing purposes. As the FPU chip will be running at a different speed to the CPU in the machine (which runs at 14.7Mhz), this is fitted next to the chip on the expansion card.

One of the first companies to offer FPU upgrade kits is Power Computing with a 25MHz FPU and crystal for £80. Although this is designed for use on the A4000/030, it's suitable for use on most of the cards featured in this round-up. Testing the chip using the standard Amiga benchmark program AIBB, the speed of floating point operations was increased by 20 times! Contact Power Computing on 0234 843388.

PC1204

£185 ■ Power Computing ■ 0234 843388
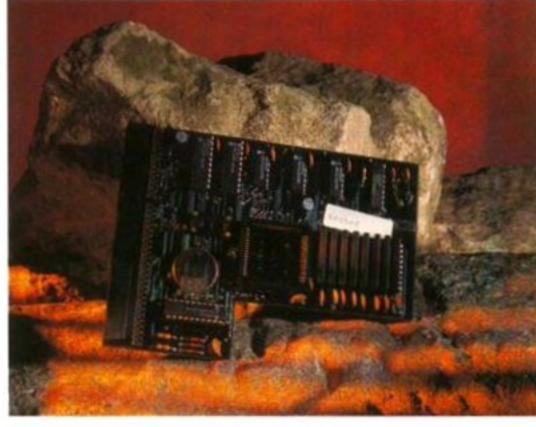
Power Computing certainly know about making decent Amiga RAM expansions – in the many tests we've previously carried out, Power's range of A500, A600 and A1500 RAM expansions consistently come out on top, and now they've entered the A1200 arena with the PC1204.

The board connects to the A1200 via its trapdoor slot, thus fitting it won't invalidate your warrantee. Although Power initially encountered fitting problems with the board (it was too big and removing it to alter its specification proved to be a fine art), they have addressed this problem and all the new ones are smaller.

The PC1204 comes as standard with 4Mb of 32-bit ZIP RAM soldered directly on to the board. Rated at 70 nanoseconds, the board extends the memory of your A1200 to a massive 6Mb of true 32-bit RAM – more than enough for even the most memory hungry of applications. Even programs such as *ProPage 4.0* and *VistaPro 3.0* run without problems. What's more, because the board features a full zero wait state design, the performance of the A1200 is actually increased! Power quote a performance increase of 2.19 times and I can certainly believe this – DTP programs redraw faster, *Imagine* renders faster, Workbench is smoother and some games (especially 3D ones) run faster.

However, the PC1204 offers more than just basic RAM expansion. As well as the now obligatory battery-backed clock, the board can also accept a 68882 maths co-processor rated up to 50MHz. The original board used PGA type FPUs, but Power now offer both PGA and PLCC type sockets to make upgrading that bit easier. If you'd like this fitted as standard, Power can supply the board complete with a 25MHz 68882 for £279. This will increase the speed of maths-intensive applications by over 20 times!

The Power Computing board is no longer the cheapest 4Mb RAM expansion available for the A1200, but it's certainly one of the best. Although RAM expansion is restricted to 4Mb, the PC1204 offers high quality design and manufacture, and it's easy to see why the PC1204 has proved to be such a massive hit. In all, a brilliant board.

The PC1204's full zero wait state design increases the A1200's performance by around 2.19, say Power Computing.
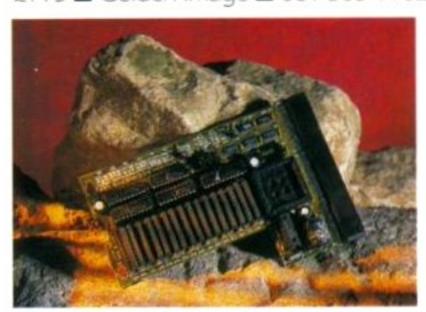
GOLD **90%**

AlfaRAM1200

£115 ■ Golden Image ■ 081-365 1102

The AlfaRAM1200 comes from AlfaData, better known for their leading AlfaScan handscanner.

The AlfaRAM1200 is a full size trapdoor-based expansion that offers up to 9Mb of 32-bit expansion using 32-bit ZIP chips (the same as the Power Computing and Ashcom cards).

The basic £115 card comes with 1Mb of 32-bit RAM, but larger 5Mb (£239) or 9Mb (£369) capacity cards are also available. If you have a PCMCIA RAM expansion, the AlfaRAM also comes with a software patch to allow both to be used concurrently. This remaps the extra 32-bit RAM so that it is not live in the same space as the PCMCIA RAM. So in theory you could have a 15Mb A1200!

The AlfaRAM can also accept a PGA-type maths co-processor rated up to 50MHz. These too can be bought pre-installed directly from Golden Image – a 5Mb card with a 25MHz 68882 costs £295. Couple this with the AlfaRAM's built-in clock and you've got a very capable card at a good price.

Verdict 85%

MBX1200

£189.95 ■ MicroPace ■ 0753 551888

MicroPace's MBX range of A1200 RAM expansions may not be the cheapest on the market, but no one can dispute their quality. What's more, the MBX range of expansions were the first on the market, so they're already well and truely established. The MBX1200z is the latest version of the MBX board that now offers a battery-backed clock facility as standard.

Although the board can be bought unpopulated, all MBX boards come as standard with a floating point maths co-processor. Both types (881 and 882) are available in different speeds starting from a basic 20MHz 68881 right up to a maths-munching 50MHz 68882.

The basic board fitted with a 20MHz 68881 costs £189.95. This price is not as low as it seems because all MBX boards are unpopulated and you will have to buy your own memory chips (in the form of standard SIMM modules) to populate the board . MicroPace sell SIMMs in 1Mb, 4Mb and 8 Mb sizes for £35.95, £159.95 and £319.95 respectively. Take these costs into account and the MBX board suddenly

MicroPace's MBX1200 – nice board, shame about the price.

seems expensive – £349.95 for a 4Mb board with a 68881.

No one could doubt the quality of the MBX1200z, but who's going to pay these sort of prices? MicroPace should take a good look at their pricing policy if they want to stay competitive.

Verdict 70%

GVP SCSI/RAM+

£299 ■ Silica Systems ■ 081-309 1111

If there's one market leader in hardware manufacture, it has to be Great Valley Products. They already have one other A1200 product on the market in the shape of the A1230 Turbo, a 40MHz '030 accelerator plus maths co-pro combo that we reviewed in last month's issue.

Now GVP have launched the SCSI/RAM+ card (previously known as the GVP 'Fang' board), an A1200 RAM expansion that also just happens to have a SCSI hard drive controller built in as standard.

The SCSI/RAM+ card has a lot of electronics in a very tight space – thanks to surface mount technology, the SCSI/RAM+ can handle up to 8Mb of 32-bit RAM using GVP SIMM modules. Although unpopulated as standard, the board need not be taken this far – if you can't afford (or don't need) a full 8Mb, the card will happily take 1, 2, 4 or 8Mb SIMMs.

Like most of the other boards on test, the SCSI/RAM+ card also offers space for a PGA-type maths co-processor rated up to 40MHz. Once again, this is not supplied as standard, so you will have to source this yourself. Possibly the board's greatest selling point has to be the SCSI interface, allowing you to use a SCSI drive with your A1200. Like the A1200's IDE connector, a single 2.5-inch SCSI drive can be installed internally. Surprisingly, GVP don't include a SCSI pass through connector, so only a single drive can be connected, effectively missing the point of having SCSI altogether. In theory, larger drives could be fitted by

SCSI or not SCSI – there's not much point either way if you don't have the right connections.

running a lead through the back of the A1200.

The GVP SCSI/RAM card is an attractive proposition if you've recently upgraded to an A1200 and you already have a SCSI drive filled with lots of software. For everyone else, however, the SCSI/RAM+ card is something of a missed opportunity. If GVP were to include a standard SCSI connector that fitted to the rear of the A1200, it would have been great. As it is, it's just too expensive.

Verdict 75%

TurboTech A41200

£159.99 ■ Siren Software
■ 061-724 7572
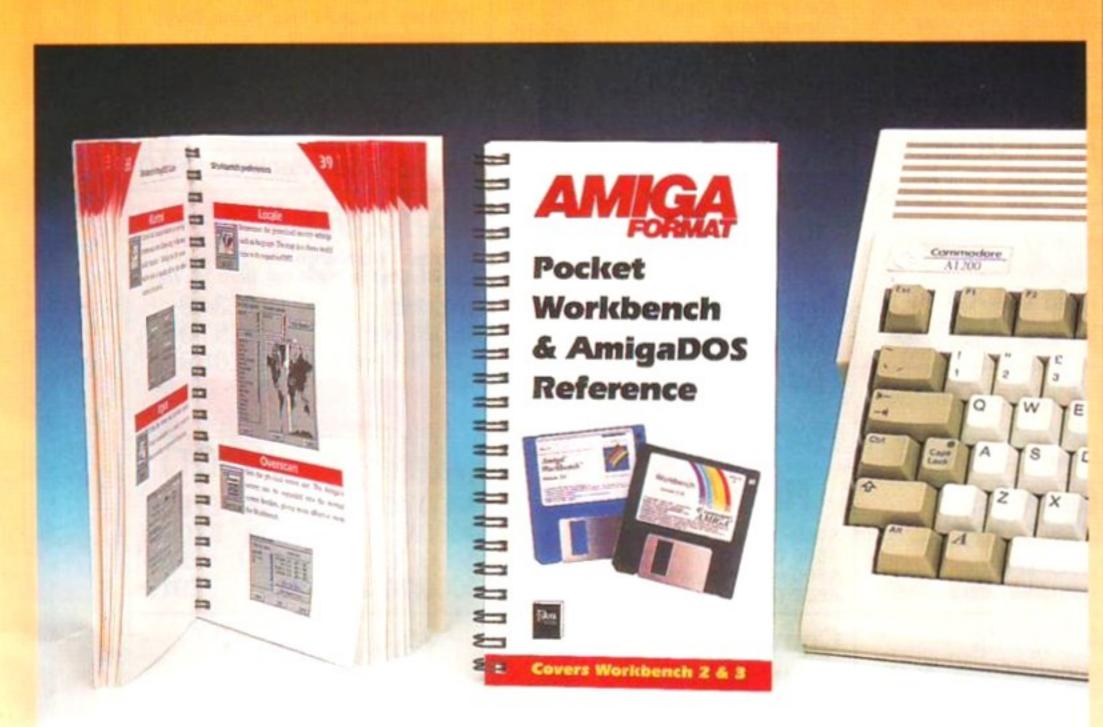
The TurboTech board certainly turbocharges your A1200, doubling its operating speed.

Siren Software's new TurboTech RAM expansion for the A1200 is certainly the cheapest on the market. Although rather similar in appearance to Ashcom's card, the TurboTech offers a maximum of 4Mb of 32-bit RAM rated at 70 nanoseconds. As a result, it turns in a similar performance to Power Computing's PC1204 card, typically doubling the speed of a basic A1200. The board doesn't offer a maths co-processor option, but this isn't too much of a concern to users who don't need an FPU – at least the price reflects this omission.

The review board we tested was a prototype and the clock battery was mounted precariously underneath the board. Siren claim it will be mounted directly on the final boards. In all, the TurboTech offers a low cost alternative to those who can do without an FPU.

Verdict 85%

TABLE OF FEATURES

Product	Supplier	Price	Stnd RAM	Max RAM	Clock	FPU	SCSI	Rating
PC1204	Power Computing	£185	4Mb	4Mb	Yes	Optional	No	90%
Blizzard	New Horizon	£169	4Mb	8Mb	No	Optional	No	93%
AlfaRAM1200	Golden Image	£115	1Mb	9Mb	Yes	Optional	No	85%
TurboTech	Siren Software	£159.99	4Mb	4Mb	Yes	No	No	85%
AX128	Ashcom	£199	4Mb	8Mb	Yes	No	No	82%
SCSI/RAM+	Silica Systems	£299	0Mb	8Mb	No	Optional	Yes	75%
MBX1200	MicroPace	£189	0Mb	8Mb	Yes	20MHz 68881	No	70%

Proper Grammar II

JULES' C

This verb group may be in the passive voice.

Excessive use of the passive voice can make a document unclear. Try rewriting the sentence using a more direct verb. 'Here is the information that was requested' might become 'Here is the information you requested'.

| Continue | Explain | Ignore | Replace | Suggest | Add |

A spelling checker and thesaurus built into your word processor may be all that you need if you are confident of your writing abilities, or if you don't need to write much formal correspondence. However, if you run a small business or want to make sure those letters to the bank manager or for a job application are well written, then a grammar checker could help turn your stilted sentences into poignant prose.
 Proper Grammar II, from American firm SoftWood Inc, is an add-on program that directly supports many and will handle files output in ASCII. You can create a document, say, in FinalCopy, open it in Proper Grammar, check it and then save it back into its original format. Or you can create a document in Proper Grammar, check it and then save it into FinalCopy.
 It works by analysing sentences and identifying the places where errors have been made - does the verb agree with the subject, for example. And its British-English dictionary not only contains the words likely to be used in

Proper Grammar II

Grammar checker ■ £39.95 ■ Softwood Inc

Julie Tolley checks whether her English and grammar are word perfect with Softwood's latest software…

Proper Grammar II

JULES' C

Consider "it's" instead of "its".
it's

People often confuse 'its' (the possessive form) with the contraction 'it's' (which means 'it is' or 'it has').

| Continue | Explain | Ignore | Replace | Suggest | Add |

A spelling checker and thesaurus built into your word processor may be all that you need if you are confident of your writing abilities, or if you don't need to write much formal correspondence. However, if you run a small business or want to make sure those letters to the bank manager or for a job application are well written, then a grammar checker could help turn your stilted sentences into poignant prose.
 Proper Grammar II, from American firm SoftWood Inc, is an add-on program that directly supports many and will handle files output in ASCII. You can create a document, say, in FinalCopy, open it in Proper Grammar, check it and then save it back into its original format. Or you can create a document in Proper Grammar, check it and then save it into FinalCopy.
 It works by analysing sentences and identifying the places where errors have been made - does the verb agree with the subject, for example. And its British-English dictionary not only contains the words likely to be used in

A SPELLING CHECKER and thesaurus built into your word processor may be all you need if words flow from your keyboard with style and precision. However for those less skilled, a grammar checker could turn stilted sentences into poignant prose when writing formal letters such as to the bank manager or for a job application.

And *Proper Grammar II*, from American firm *SoftWood Inc*, aims to do that. With the small businessman in mind, Softwood have developed this add-on program that directly supports many word processor file formats and will handle files output in ASCII. You can create a document, say, in *FinalCopy*, open it in *Proper Grammar*, check it and then save it back into its original format. Alternatively, you can create a document in *Proper Grammar*, check it and then save it into *FinalCopy*. *Proper Grammar* cannot be run from floppy - it has to be installed on a 1Mb hard disk, or to RAM disk.

Proper Grammar **works** by analysing sentences and identifying where errors have been made - does the verb agree with the subject, for example. And its British-English dictionary contains words likely to be used in producing memos, letters and reports, and foreign words and phrases, plus it has facts about the way different words work in sentences.
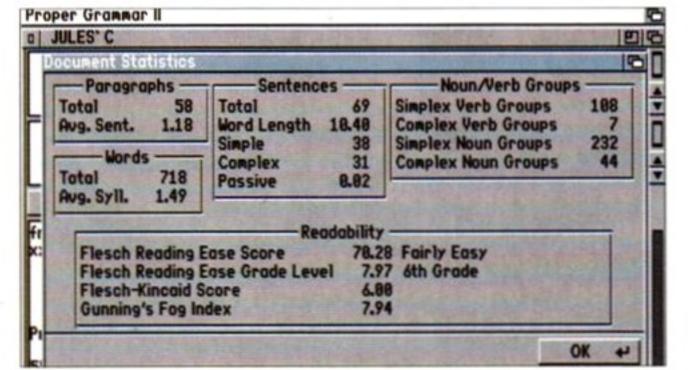
When you start *Proper Grammar* an untitled window appears with all the usual document features of title bar, text areas, scroll bars and command buttons. The two shallow text areas at the top are where the suggestions for spelling or grammar corrections appear. If

The passive voice is one of this program's pet hates. If you use a past tense, it presumes you are using the passive voice, which is often not the case.

One of the best features of *Proper Grammar II* is the way it highlights common errors, like when to use 'its' or 'it's' and 'it's'.

PROPER GRAMMAR is available from Gordon Harwood Computers on 0773 836781

you make a spelling error it suggests an alternative, and the 'suggest' keypad changes to 'suggest +' which, when selected, provides a list of alternatives. The word you then highlight will replace the misspelt word. This is straightforward if you have made a typographical error, but if *Proper Grammar* thinks you have used the incorrect spelling of a word, for example 'right' instead of 'rite', in the text area below there will also be an explanation of why you should be using this spelling instead.

Unfortunately, *Proper Grammar* is not flexible enough to be correct on all occasions, and it can be irritating to read through text it displays explaining the differences between two words, and when they should and should not be used, only to find that you have not actually made a mistake. However, where it works well is with common mistakes people make such as when to use 'its' and 'it's' - the explanations are simple and leave you in no doubt as to which version you should apply.

This is not so simple with grammatical mistakes. To understand what *Proper Grammar* is asking you to change in your sentence can really only be clear if your knowledge of grammar is strong enough that you know what split infinitives, pronouns, and modifiers and quantifiers are. Surely this defeats the purpose - for if you understand what you should write, then you will not need *Proper Grammar*. But I suppose software of this kind has to be at one level or the other, and it's better to aim high.

There are three menus - Project, Edit and Macros. As well as the usual options, Project

includes 'Statistics', which when selected brings up a window to give you all the document figures including not only number of words and paragraphs, but also the number of simplex and complex noun/verb groups, number of sentences used, average word length... the list is endless. Decide for yourself how vital these statistics really are! Edit includes copy, paste and so on, and Macros is simply for creating up to 10 quick key commands.

Proper Grammar has a limited appeal, but if you need word-perfect documents, it works reasonably well.

Proper Grammar II

JULES' C

Document Statistics

Paragraphs		Sentences		Noun/Verb Groups	
Total	58	Total	69	Simplex Verb Groups	188
Avg. Sent.	1.18	Word Length	18.48	Complex Verb Groups	7
		Simple	38	Simplex Noun Groups	232
Words		Complex	31	Complex Noun Groups	44
Total	718	Passive	8.82		
Avg. Syll.	1.49				

Readability		
Flesch Reading Ease Score	78.28	Fairly Easy
Flesch Reading Ease Grade Level	7.97	6th Grade
Flesch-Kincaid Score	6.88	
Gunning's Fog Index	7.94	

OK

The Statistics window is full of strange scores. Your text's readability is based on the number of words in a sentence and syllables in a word, to help you write at a level American school pupils will understand!

Proper Grammar II

SPEED ● ● ●
Bit slow, especially when 'statistics' is run, because the screen redraws as it counts.

DOCUMENTATION ● ● ●
Manual is well-written and easy to understand. Glossary of grammar jargon is useful.

ACCESSIBILITY ● ●
Because it's an add-on, rather than being integrated, or built in like the grammar checker in *Excellence!*, it's harder to work with.

FEATURES ● ● ●
Some seem pointless, but others are useful.

VALUE ● ● ●
At around a third of the price of a word processor, it's quite a high price to pay.

AMIGA FORMAT Verdict

55%

Beautiful, aren't they?

But there's more to it. Beneath their surface lies a complex structure of cells; inside these, chemicals transmute and are traded; their constituents, neutrons, protons and electrons, dance to hidden rhythms – all are patterns of beauty.

Many Amiga owners might gasp at the pretty graphics of an Amiga game; but many more want to look further, deeper. It is for these owners that *Amiga Shopper* caters.

We aim to satisfy your curiosity, to encourage your delight in computing; with us you can explore all of its possibilities, from desktop publishing, through programming, to DIY hardware projects. In each of our articles we take the trouble to explain unfamiliar concepts and to explain jargon in layman's terms. Every month we give more answers to genuine reader problems than any of our rivals.

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"I see much more beauty than [the artist] sees. I can imagine the cells inside, which also have a beauty. There's beauty not just at the dimension of one centimeter; there's also beauty at a smaller dimension."

Richard Feynman, Nobel prize winning physicist, responding to an artist's criticism that he fails to appreciate the beauty of a flower.

AMIGA SHOPPER

Following AMOS Pro's launch comes a new compiler. Promising massive speed increases, could it be a must for AMOS programmers? **Jason Holborn** writes.

AFTER MONTHS OF delays, Europress Software have finally launched the *AMOS Professional Compiler*, a companion product to *AMOS Professional*. Just like the previous compiler, the aim is simple – to allow the user to transform their *AMOS* creations into lightning-fast machine-code programs that run rings around their interpreted counterparts. What's more, compiled programs no longer need the *AMOS* interpreter, so you're free to hand out (and even sell) your compiled *AMOS* creations without having to worry about infringing Europress' copyright.

Surprisingly, this new compiler isn't just restricted to *AMOS Pro* – Europress have designed the compiler so that it can be used with anything from *Easy AMOS, AMOS 1.35* and even source code written using a text editor such as *Cygnus Ed*! So why buy the interpreter in the first place if the compiler negates its use? Well, although you could theoretically just buy the compiler and still write *AMOS* programs, you would still need an interpreter to make use of the special memory 'banks' that *AMOS* uses to store sounds, graphics et all. Not only that, but *AMOS* is such a complicated language that you won't get far without a manual!

The compiler can be used in different ways, depending on your own system and the version of *AMOS* that you own. If you own Easy *AMOS* or *AMOS 1.35* (the version of *AMOS* that we gave away on our Coverdisk), then the compiler should be run as a standalone program either from the Workbench or from the Shell. If you own *AMOS Professional*, however, and you've got plenty of RAM available, then the *AMOS Pro Compiler* can be installed to run directly from within *AMOS Pro*.

In order to do this, you will need to upgrade your *AMOS Professional* to version 2 (don't get too excited – version 2 offers little that is new). Once installed, the compiler can be called from within the *AMOS Pro* interpreter simply by selecting 'Compiler' from the

When used with *AMOS Professional*, the new compiler runs as if it was built into the interpreter, allowing you to code and compile without ever leaving AMOS Pro!

AMOS Pro Compiler

Language Compiler ■ £34.95 ■ Europress Software

AMOS PRO COMPILER is available from Europress Software on 0625 859333

AMOS Pro Compiler comes bundled with a number of *AMOS* programs which show how effective it is at speeding up your machine. This demo performs a *DPaint*-like perspective operation on any IFF image.

menus. Once selected, a nicely presented compiler window pops up on to the screen allowing the entire compilation process to be carried out simply by clicking on gadgets.

One nice touch is that the compiler can compile code held within an *AMOS Pro* editing window. Better still, you can even instruct it to place the compiled code into a second window, allowing you access to both your source code and the compiled program without having to quit the *AMOS Pro* Interpreter!

Programs can also be compiled into Workbench or Shell executables too, so your code can be made independent of the main interpreter. What's more, compiled programs can be shrunk to a matter of kilobytes by crunching them using the built-in cruncher (this can reduce *AMOS* object code by up to 80 per cent) or by using the new 'shared library' facility. This instructs all compiled *AMOS* programs to get their routines from a disk-based library called 'AMOS.library' that must be placed in the DEVS: directory of the boot disk.

Europress claim the new compiler produces leaner and meaner code that runs faster than code produced by the previous one, and our tests confirm this. To prove how much faster compiled code is, Europress bundle demonstration programs including a fractal graphics generator and a game, which are considerably enhanced by the compiler. But don't expect your *AMOS* creations to start running at the same speed as a machine code program – you

will never get this sort of performance unless you code your programs in *Assembler*!

If you're an *AMOS* programmer, then get hold of *AMOS Pro Compiler*. Even if you haven't upgraded to *AMOS Professional*, the new compiler provides considerable benefits. Virtually every aspect of the *AMOS* instruction runs smoother and faster when compiled. Add to this the extra code-security compilers give (no one can steal your code once it has been compiled) and the *AMOS Pro Compiler* is a 'must have' for all *AMOS* owners.

Needs 61.24 seconds for 1 loops.
(= 3062 VBLs)
right button to quit, left to restart.

Amos Pro Compiler

SPEED ●●●●●
Both the speed of compilation and the performance of the final compiled code is top notch.

DOCUMENTATION ●●●●
The previous compiler manual was short on detail, but this one is a joy to read.

ACCESSIBILITY ●●●●●
If you own *AMOS Pro*, to run the compiler you simply select 'Compiler' from the menus.

FEATURES ●●●●
The new compiler is far more configurable than the previous compiler.

VALUE ●●●●
Even at £35, the *AMOS Pro Compiler* represents seriously good value for money!

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SAVE £5
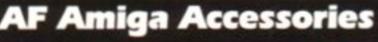
MicroDeal's new combined audio and video digitiser enables you to capture both sounds and pictures for manipulation on your A500 or A500 Plus, allowing you to make your own multimedia movies.

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AF Amiga Accessories
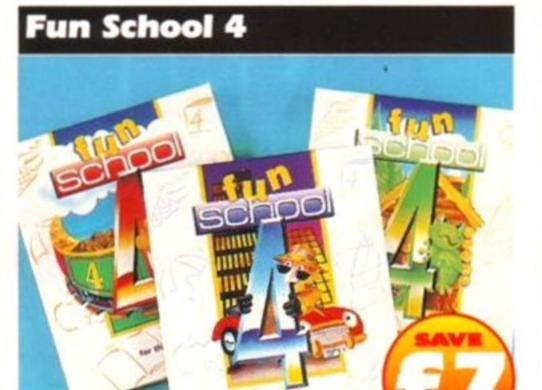
SAVE £5
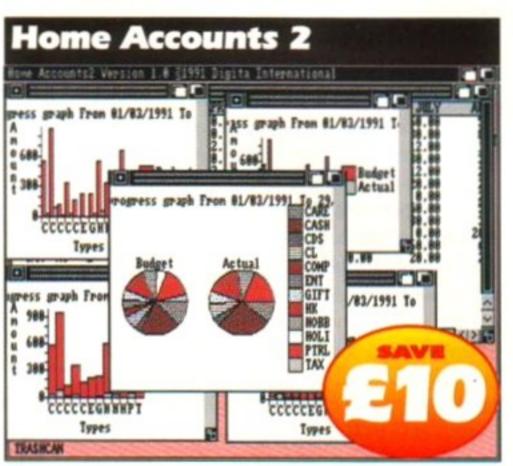
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A600 dust cover (not pictured)	£6.99	AF6DUST
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Let the kids and the Amiga make friends, with Europress' acclaimed educational software!

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Frog Disk	£24.99	**£17.99**	**AM232**
Spy Disk	£24.99	**£17.99**	**AM233**

Home Accounts 2

SAVE £10

Described by us in *AF*30 as 'a package which will suit any household', this is the ideal way to keep track of your financial affairs, from what's in your cheque account to how much is left after the bills!

Description	RRP	Price	Order Code
Home Accounts 2	£54.99	**£44.99**	**AF229**

StereoMaster & Quartet

SAVE £10

An ideal entry level sampler, plus we're throwing in for free the excellent Quartet sample MIDI sequencer, which will enable you to build your sampled sounds into full music tracks.

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SAVE £4
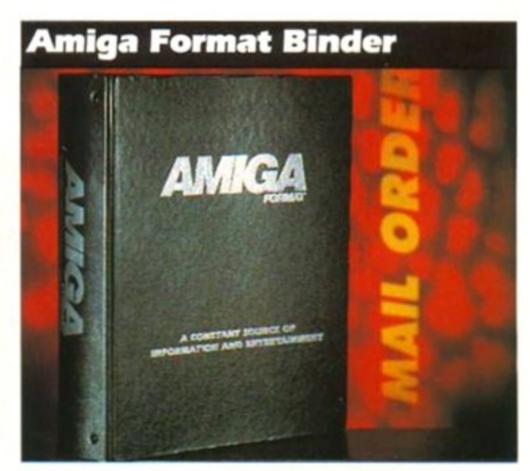
It's well over a year since new Amigas were sold with less than 1Mb of memory. Nowadays many games, as well as most serious software, require that magic meg. Here's a bargain way to upgrade your A500.

Description	RRP	Price	Order Code
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One binder	£4.95	**AF108**
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The Amiga Format Star Buys

Sportsmasters

This is a totally excellent compilation – even if we do say so ourselves (which we did in *AF*44, when we awarded it 90 per cent and gave it an *Amiga Format* Gold). Not only *PGA Tour*, the best golf game ever (and don't believe anyone who tries to tell you otherwise), but *Indianapolis 500*, *Advantage Tennis* and *European Championship Soccer 1992*, all in one budget-priced box. Buy it!

Description	RRP	Price	Order Code
Sportsmasters	£29.99	**£24.99**	**AF252**

New Technosound Turbo

This recently updated sampler from New Dimensions enables you to grab digitised sounds, then sequence them into simple compositions. It also contains a new cartridge, an updated manual *and a* set of audio leads.

Description	RRP	Price	Order Code
Technosound Turbo	£35.95	£29.95	**AF246**

History Line

HistoryLine is based on Blue Byte's earlier *Amiga Format* Gold-winning game *Battle Isle* (*AF*29 – 90 per cent), but they've managed to add huge amounts of historical background and use WWI-style tactics. Blue Byte have come up with not only another *Format* Gold game (*AF*43 – 94 per cent), but probably the best strategy game ever seen. It's a very intuitive and playable game, which no Amiga gameplayer should be without.

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The AMIGA FORMAT Collection

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If you want to get the most out of *AMOS*, why not buy the two most popular *AMOS* extensions in one pack? The *Compiler* translates your *AMOS* creations into stand-alone 100 per cent machine code, while *AMOS 3D* lets you create amazing 3D worlds!

Description	RRP	Price	Order Code
AMOS Bundle	~~£64.99~~	**£49.95**	**AF247**

AMOS Professional

SAVE £10

This is one of the highest-rated programs ever reviewed in *Amiga Format*. Top of the *AMOS* range, It updates the famous *AMOS* extended basic programming language with new commands and facilities that make it a real winner! (Needs 1Mb minimum.)

Description	RRP	Price	Order Code
AMOS Pro	~~£69.99~~	**£59.99**	**AFAMPRO**

Easy AMOS

SAVE £5

Designed for the beginner who wants to learn programming but doesn't know where to start, *Easy AMOS* is more than a programming language. Based on the successful *AMOS*, it has many helpful examples and detailed explanations to help you learn.

Description	RRP	Price	Order Code
Easy AMOS	~~£34.99~~	**£29.99**	**AF250**

Graphics Workshop Manual

Graphics Workshop is a drawing package so special that, along with all the normal tools you would expect from a top paint program, you get some powerful extra utilities.

You're not limited to using one custom brush either, you can pick up and store up to 10. It also features ANIM and Animbrush forms of animation, and a cell system which is probably the most powerful animation system on the Amiga. Why not get the most out of this top program by buying this illustrated instruction book and tutorial guide (with a special tutorial disk).

Description	Price	Order Code
GWManual	**£13.95**	**AF249A**

AMOS Manual

If you want to make the most out of *AMOS The Creator*, this is exactly what you need. It's the complete manual, as supplied with the package, and it also includes an Extras disk that contains all the example programs and extra bits and bobs that we couldn't fit on the *AF* Coverdisks. We'll continue to give lots of tutorials and advice, and show you techniques for creating specific kinds of programs as a regular feature in *Amiga Format*, so you wouldn't be stuck without this book: but as the complete reference work, you'll find *The Manual* will make your *AMOS* career far more enjoyable and creative!

Supplied book is perfect bound!

Description	Price	Order Code
AMOS Manual	**£13.95**	**AF249**

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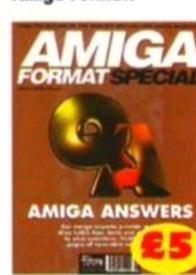
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ADVANCED UTILITIES 2

UTIL

PD-SOFT V1054

Editing keymaps has never been easier. Using KME, you can even program function keys with frequently used commands.

There are a vast number of excellent utilities available for the Amiga in the Public Domain. In fact, there are rather too many, and finding the relevant one can be difficult. Fortunately, those nice people at PD-Soft have produced a variety of sets of utilities disks, including this one. It's aimed at the serious user, who wants to fiddle with the inner depths of their machine and includes such delights as SCSI-Mounter (which scans the SCSI bus and can mount any newly inserted drives, such as Syquest removable disks), KME (a Keymap editor, so you can program any keys with frequently used commands), Restaure (Undelete utility), ReOrg version 2.33 (disk defragmenter), Compressdisk (a virtual compressed disk utility) and Enforcer, a utility which sits in memory and stops any programs doing illegal things with memory.

A.U.G.I.R.

CLUBS

COMPUTER & DESIGN SERVICES

Have you ever wanted to get in contact with other Amiga users, but haven't known where they are? Are you moving to the USA and want to get in touch with the people who count in the Amiga scene? If so, this disk could be useful. It's a collection of as many user groups in the UK and throughout the world as the Masked Artist (the chap who runs Computer & Design services) could find. At the moment it's not a terribly long listing, but as the word gets around I'm sure it will expand. The user groups are divided into a series

PD Update

The sun may be out, the sky may be blue, but **Richard Baguley** is still stuck in a dark office digging through the piles of cheap and free software that keep appearing on his desk...

of categories (UK, US and Canada, and so on), and each has a few words describing any sort of speciality, geographical restriction, and other details. There is also a section on Bulletin Boards, but this seems rather pointless, as any BBS will give you a list of many hundreds of others when you log off. Anyway, despite this, if you're involved in a club or group, it would be worth contacting the Masked Artist to see about being included in this list.

PC-TASK 2.02

UTIL

CYNOSTIC PD U0171

If anyone tells you PCs are easier to use than Amigas, just whack them with an MS-DOS manual. They're lying.

It may sound like a silly idea, but it is possible to turn your Amiga into a IBM PC compatible without having to invest in any extra hardware. Whether you want to or not is another question, of course, but it's nice to have the option. This program has been around for sev-

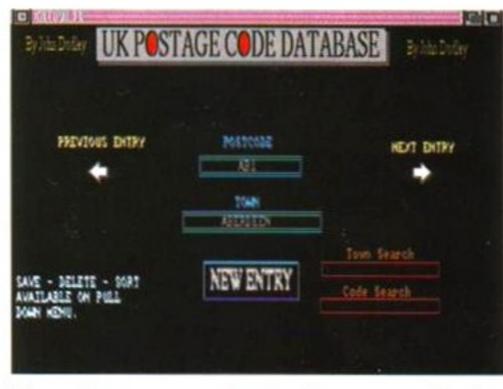eral years, and the author (Chris Hames from Australia) has been continuously developing it over this period, and it now supports running in true VGA mode on an AGA machine. It's still nowhere near as fast as the various hardware emulations, but if you only want to run simple text based applications, it's definitely worth checking out.

The version on this disk is only a demo one, which means you can't write to floppy or set up any partitions on your hard disk for the emulator to use. If you want to use it seriously you will need the registered version, which will cost you $35.

UK CODE BOOK

UTIL

ESSEX COMPUTER SERVICES

It's not the greatest user interface I've ever seen, but the post code and dialling code databases could be useful.

Have you ever been given a phone number for someone and wondered where they were located? This disk contains two programs which contain the details of all the UK dialling codes and postal codes. So, if you have the phone number of a company and want to know whereabouts in the country they are, you tap the dialling code into the program and it will tell you the town or general area where they are located. Don't expect it to give you any more detail than this, but this could be useful. It's a licenseware disk, so it will cost you £3.50 plus postage.

PLOTTERS

UTIL

PD-`SOFT V1068

Mathematics can be beautiful. No, I'm not referring to the way that a curly X fits next to a smooth Y, but to the graphics that can be produced from mathematical equations using a powerful machine such as the Amiga. This disk contains three excellent mathematical graphs programs, including the 2D graph program

---

ASSASSINS GAMES PACK 90

GAME

ASSASSINS

Megaball is based on the old PD fave breakout, but this version has some nice new addictive features.

We've featured these game packs several times before in PD Update, but they've always been from other PD libraries. This time, we've got them straight from the horse's mouth, as it were. This is The Assassins' 89th disk, but they've managed to

keep up their standards. This disk contains three games – *Megaball*, *X-Fire* and *Cluedo*.

Megaball is a glorified breakout clone, but numerous new features have been added to give it a new edge. These include special power-ups to double the size of your bat, sticky bats and others. Beware, however, as some of the power-ups can be power-downs, as they may shrink your bat or lose you a life. There are a good range of screens, and the graphics are smooth and colourful.

X-Fire is a curious shoot-em-up where you control a round object which has to shoot red jellies and green skulls. As to why, I don't really know as most of the messages in the game seem to be in a language not known on this planet.
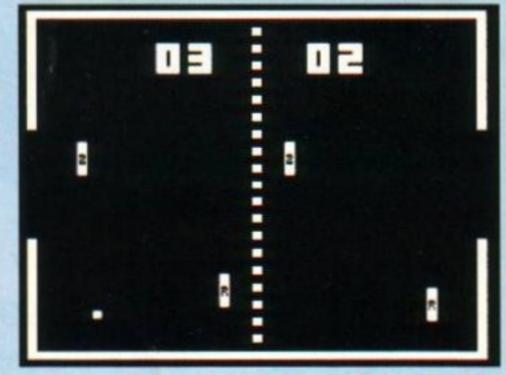
The final offering is a shareware version of *Cluedo* by Greg Pryor. I've never been a fan of the board game, but all of the lead pipes, daggers, conservatories and dining rooms are present.

Continued on next page

DIRTY RACKETS
ESSEX COMPUTER SERVICES

GAME

If you're of a similar age to many of the Amiga Format team, your first experience of computer games will no doubt be a rather curious looking black and white game on a Binatone console using a couple of paddle controllers. This was the state-of-the-art at the time, and paved the way for the variety of games machines now available.
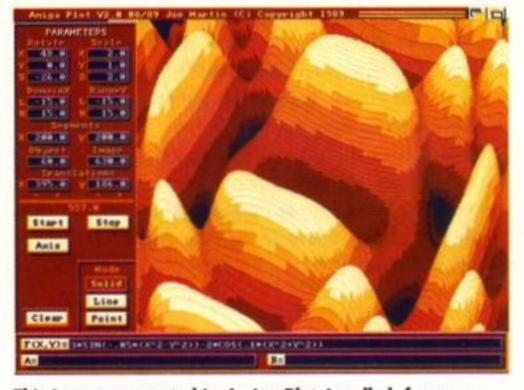
Although nostalgics may want to play it only in the 'Classic' mode, several new features have been added. In the 'modern' option, games are played over a nicely drawn background, and you can add options such as playing with a brick wall covering the goal area. Every time the ball hits it a brick is destroyed, and once the ball passes through, the game is lost. There are also nice touches such as deflecting the ball, and the ability to play championships and leagues. Highly recommended.

I remember the days when a game was the only game there was... Ah, things were simple then....

... but the modern version of the football game has other elements like knocking bricks out of your opponent's wall.

This image, generated in *Amiga Plot*, is called, for some reason, The Devil's Seat. It looks uncomfortable to me...

PlotXY and the 3D graph program *Aplot*. PlotXY is designed to produce high quality 2D graphs, which can then be saved out as IFF files for inclusion into documents, slideshows and so on. It's highly configurable, and can produce a variety of graphs. However, it does include options for calculating linear regression, polynomial fit and a variety of statistics about the data.

APlot works in three dimensions, producing the sort of wavey sine graphs much beloved of BBC micro owners in the early Eighties. As you would expect, these can be saved as IFF files, and the program provides a good degree of control over the scaling of the graph and the camera viewpoint. If you're into mathematics, this could be a useful disk. If you're not, it can produce some rather nice images anyway.

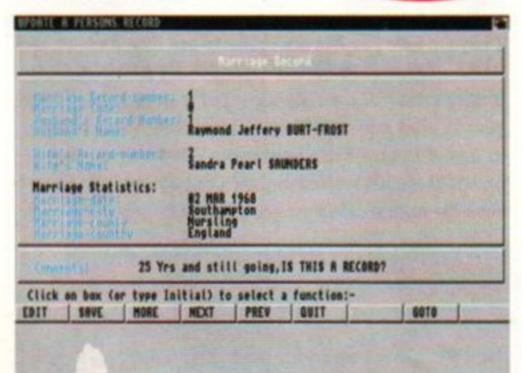## SOLITAIRE SAMPLER
TOWER SOFTWARE

GAME

If Solitaire is the only game you play, you should check out the five variants on this disk from Tower Software.

Card games haven't always made the transition from desk to computer screen successfully, but thankfully this one has managed it. This disk contains five variations – Carlton, Martha, Pas Seul, Slider and Poker Squares – on the basic Solitaire game. If, like me, you've never heard of half of these, you will be glad to see that the authors have included some excellent help screens, which give both text and graphical help on how to play all of the variations. Several of these also have various levels of difficulty, and if you've not managed to complete a game, you can step back and try a different approach with the same deck.

The graphics aren't brilliant, but they are easy to distinguish, which is what is really needed. There are a few rough edges to the game (such as the way that some of the text is wrongly spaced, giving an unreadable mess), but overall it's an excellent start for a new software house which bodes well for their forthcoming card games compilation.

A-GENE 4.34
AMIGANUTS

UTIL

With A-Gene you can keep up to date with all your family's goings on – especially useful if it's a big one.

A-Gene is a program which has been going for several years, achieving somewhat of a reputation as the best genealogy program on the Amiga. For those who've never come across one of these programs, it's designed for compiling data about family history, and producing family trees, and charts from this data.

This is version 4.34, and has had some significant improvements since the last version, most impressive of these is the ability to include a scanned image with a data file, so you can have a photo of each of the family members included in the family tree. Unfortunately, this image has to be displayed separately from the data, which is a bit disconcerting. It would have been better to be able to display this in a small window with the

data, but this is probably more to do with the limitations of GFA Basic (which was used to write the program) than any limitations of the program itself. It's also faster than previous versions, and the user interface has been made a little easier to use.

If you're interested in this area, this program isn't PD, but it is available for the excellent price of £15 from Amiganuts.   AF

WHERE TO GET THE DISKS IN THIS ISSUE

PD-SOFT: 1 Bryant Avenue
Southend On Sea, Essex SS12YD. 0702 466933

THE ASSASSINS: 32 Ripley Ave, North Shields
Tyne & Wear, NE29 7SA

VISAGE COMPUTERS: 18 Station Road
Ilkeston, Derbyshire DE7 5LD. 0602 444501

ROBERTA SMITH DTP: 190 Falloden Way
Hampstead Garden suburb
London NW11 6JE. 081-455 1626

AMIGANUTS UNITED: 0703 470017

ESSEX COMPUTER SERVICES
ECS, Freepost, Basildon, Essex SS16 4BR.
0268 553963

TOWER SOFTWARE: P O Box 9, Gosfort
Newcastle upon Tyne, NE3 1QW

CYNOSTIC PD: 85 Wyken Croft
Coventry, CV2 3AD. 0273 613817

COMPUTER & DESIGN SERVICES, Dept PD
24 Blackmoor Croft, Tile Cross
Birmingham B33 0PE. 021-779 6368

ABackup will back-up your hard disk and compress the data, cutting down the number of floppy disks you need.

PD Special

Imagine the worst possible scenario happening – losing everything you have stored on your Amiga's hard disk. **Richard Baguley** shows you some bargain ways of averting such a crisis.

HARD DISKS ARE, inevitably, becoming one of the 'must haves' in the Amiga world. Anybody who has used one will find it difficult to go back to running from floppy disk. It's faster, bigger and easier to use than a floppy disk, but there is a downside. After all, you are putting all your eggs in one basket, and if your hard disk fails, you've got a problem.

As a rule hard disks are pretty reliable. They will sit quietly in your computer and stand up to many hours of whirring and head toing and froing without even a murmur of complaint. Unfortunately, they are mechanical, which means that they will fail eventually. And if the head of the disk touches the surface of the disk (called a head crash), you stand a good chance of losing all of your data and programs. However, if you've got a back-up of the data, you could recover it or copy it over to another drive. But most hard drive back-up programs (Quarterback Backup, for example) don't come cheap.

Fortunately, the Public Domain offers an alternative. There are several PD and Shareware hard disk back-up programs, but the best I've come across is ABackup, written by French author Denis Gounelle. Although it's freely distributable, the author requests that you send him a shareware payment of $10 (US), or $20 US Dollars for regular updates. For the peace of mind that the program brings, this is a small price to pay. It's also been regularly upgraded, and the latest version boasts support for external data compression libraries, high density disks (under Workbench 2 and above) and the ability to restore data from damaged disks. It's easy to use, with a full point and click interface.

Backing up a complete disk may seem a chore, but it's not always necessary. What you can do is take one full back-up of every file on the disk, say once a month, but then only back up files that have been created or changed. This is done by using something called the
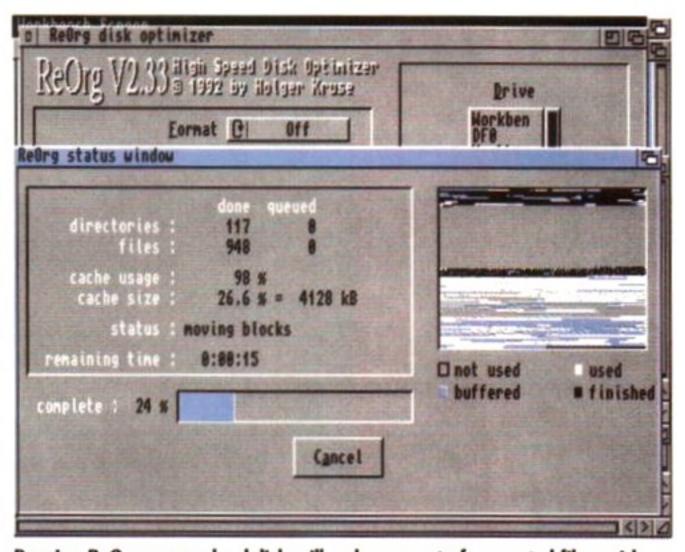
archive bit, which is part of the disk Icon. When a program like ABackup backs up the disk, this bit is set to one. When a file is created or changed, this is then set back to zero. The back-up program can then be set to only back-up files with the archive bit set to zero, so you won't spend hours backing up files you already have a copy of. The best way to work this is to have several sets of back-up disks. Once a month, take a back-up of the entire disk, and once a week take a back-up of the changed and new files. This means that if the worst possible thing happens (ie your disk crashes and you lose all of your data), you will be able to restore all of your data fairly easily, and you won't spend too long backing up your disk.

It's also possible to speed up disk access by using a caching program such as FastCache, written by Phillip D'ath. This is a program which copies part of the disk into memory, and redirects programs to this. You do lose a chunk of memory, but if you've got a few megabytes, you could allocate half a megabyte to the cache and it would considerably speed up access to often used files. Of course, if you are accessing files from several different parts of the disk, the cache isn't going to make much difference, but if you're repeatedly reading or writing to the same part of the disk, it does do this a lot quicker.

Over a period of time, your hard disk will become fragmented. This doesn't mean it's going to break into little bits, but that files have become split into several parts, which may be in different areas on the disk. If your hard disk is fragmented it's going to take longer to load programs or files, since the disk head has to

move to different parts of the disk, which takes time. This is caused by the way that AmigaDOS saves files. It doesn't look for a space big enough to hold the entire file, but puts part of it in the first available space. The rest of the file goes into another space, and this inevitably leads to fragmentation.

What's needed is a program which can sort through the disk and reorganise all the files in one place. The PD program ReOrg (by Holger Kruse) will do this on any floppy or hard disk, although it does take a long time if you've got a large hard disk. It scans the entire disk, and builds a map of where all the files are held. It then moves the files around until they are no longer fragmented. Of course, this can be hazardous. If you had a system crash while ReOrg was moving your data around, you could loose most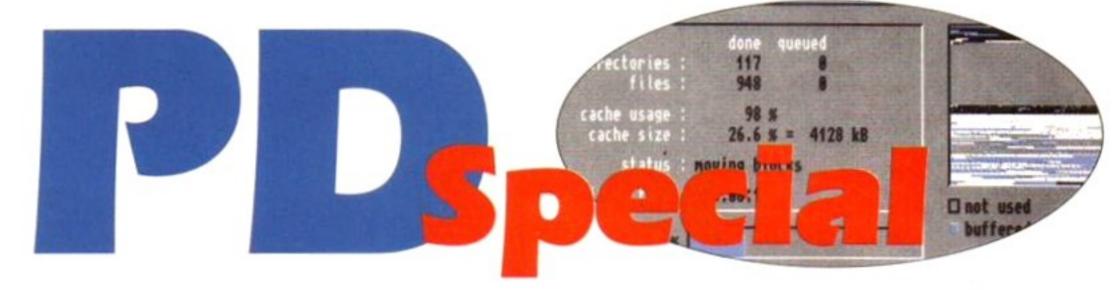 if not all of it. Frankly, anybody who optimises a disk without first backing up the data on the disk is asking for trouble.

Running ReOrg on your hard disk will make access to fragmented files quicker.

155

According to Seekspeed, this is a fast disk. However, it could be speeded up more by using the FastCache program.

TECHNOLOGICAL DEATH
TELESCAN

DEMO

More Amiga fans climb on their proverbial soap-box and chant the things we like to hear...

PD Demo Zone

From the deepest depths of the dark demo testing room **Andy Nuttall** reveals all that's often weird, on occasions wonderful, and from time to time a tad wacky, in the world of Public Domain music, graphics and demos.

The name *Technological Death* conjures up images of a demo so powerful, advanced and blindlingly fast that it drives the Amiga to the very limits of its capabilities. However... it's not quite that good.

Reminiscent of recent trackmos *State of the Art* and *Jesus on Es*, *TD* is a mish-mash of lots of styles and techniques; some of which we've seen before like bouncy balls, whirling dots and spinning lines; but others are pretty spiff and original-ish. The two best parts are a box rolling around a 3D scrolling chequered floor, with both moving parts nicely synchronised, and a *State of the Art*-style morphing sequence with a bloke kicking a ball, and a leopard running.

The music is ravey, as usual, and fairly well matched to the graphics. If you're a fan of the two trackmos mentioned above, you will like this – if you haven't heard of any of them, get all three.

HOW TO SKIN A CAT
CYNOSTIC, DISK D0138

DEMO

Melon Design return with a cool demo featuring a rather bizarre picture of a cat, which was apparently drawn by a seven-year-old. This is used to introduce lots of demoey-style bits, with sentences like "I sat down and tried to become a piece of rubber and imagine what would happen under heat." Er, yes.

The blurb says that there are some 'AGA bits', but

Don't be fooled by this rather excellent cat. The piccy used most in the demo is altogether more linear – and cute.
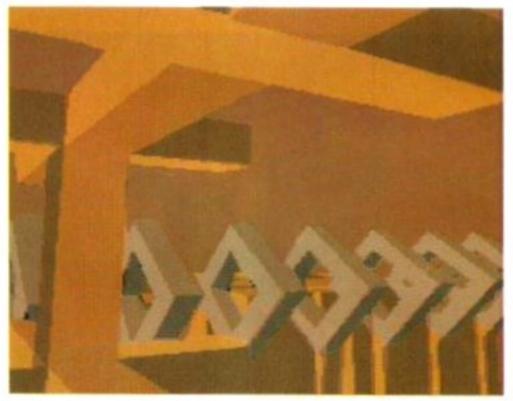
quite which bits they are I don't know. OK, there are some nice routines, a few gradient colour wipes here and there, but nothing which seems to make use of the AGA machines.

MOBILE DESTINATION UNKNOWN
CYNOSTIC PD, DISK D0131

DEMO

The new demo from Spaceballs, the now infamous coding group recently responsible for the superb *State*

To convey the sense of movement and complexity in the form of a grab would turn out, well, like this, really.

of the Art* trackmo, goes in a totally different direction to their last demo.

MDU has a funky, jazzy soundtrack, which couldn't really be more different to the harsh techno of *State of The Art*. The relaxing music is accompanied by some spinning, well, OK, vectors again, but there's something about the quality of the graphics which makes it more appealing than most vector demos. Maybe it's the pastel colour scheme. Anyway, it's quite short, but definitely worth a mention.

Continued overleaf

SPEED ANIM
PD SOFT, DISKS 3142-3145
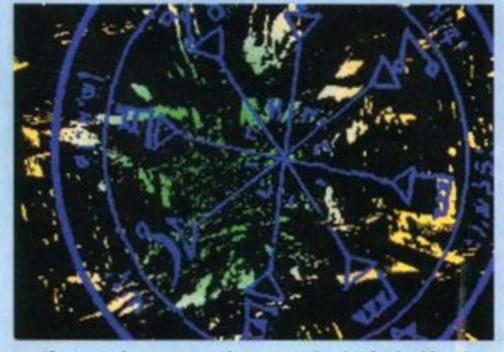
DEMO

An AF pin badge goes to the first person who correctly identifies this, er, thing... um, er, yes...

...Oh great, here comes the anim. This bit looks like the opening sequence to the *Twilight Zone*...

...except without the 'new version' of the Grateful Dead soundtrack. No, the music here is much better.

Strange one, this. It's a four-disk demo by coders Sim, which consists of, yes, lots of vectors and things, but they have been used in a somewhat different way to the norm.

If you've ever seen Kraftwerk's *Musique Non-Stop* video, you will know something of what to

expect from this – wire-frame graphics depicting spinning people, heads and hands, which are sometimes filled-in and light-sourced.

Also featured are some excellent psychedelic routines, with still graphics occasionally flashed over the top. Although *Speed Anim* is four disks

long, only three of the disks we have actually worked, which is a shame. Also, there is no disk requester to prompt you when you need to swap disks – the screen just turns black. Aside from these gripes, though, this is an interesting demo and worth looking at.

ALCHEMY
TELESCAN

DEMO

After watching an excellent title screen, which counts down the long loading sequence, I was expecting an incredible demo to follow. *Alchemy*, however, consists of several interlinked animations – not showing great skill or technical ability, but following a good story.

It begins with an alchemist in his laboratory, pouring a chemical over a dead mouse. He is creating an Amiga mouse – the old mouse-into-mouse trick. This bit is good, with doomy, dark graphics and creative sound effects, but then it deteriorates into a space adventure with psychedelic graphics. The animation is still OK, but the colours don't work – although there are flashes of inspiration.

In the film-style introduction, we are presented with a castle, and a few bits of lightning to set the scene...
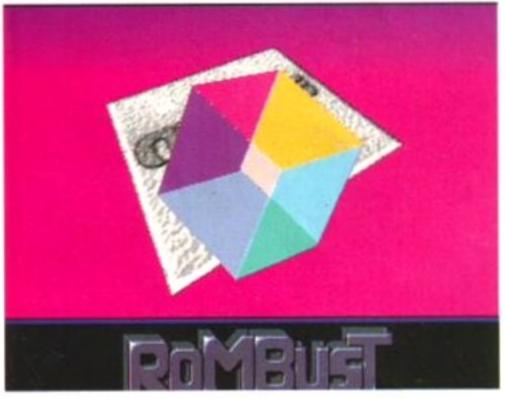
...for the rest of the demo, which involves alchemy or at least, turning mouse into mice... see below.

A1200/A4000 DEMO COMPETITION
NBS

DEMO

Another addition to the rather poor collection of AGA-only demos, the Rombust is not exactly awe-inspiring.

A collection of four demos which are apparently AGA only. I say 'apparently' because although they will only run on an AGA machine they don't seem to take any advantage of the machine's capabilities. There's a small lo-res raytraced anim, a demo which we reviewed last issue (*Retina Euro One*) which certainly used to work on the normal Amigas, a TRSI intro demo, and a spinning box over a copper background. Well, blow me down, it's an AGA-only copper background! Hooray! The world is saved. When, oh when, is someone going to do a demo for the AGA machines which actually looks good? Along with the demos there is a Fake Fastmem utility which, um, fakes fast memory, really.

SIMPLICITY
CYNOSTIC PD, CASSETTE

TAPE

Well, it's minimal, I suppose. Simple.

Not PD at all, this tape by Minimal Arts is noted in this column because it was composed and performed by Jester of coding group Sanity. As well as using tracker programs, Jester uses his Amiga to control lots of MIDI instruments – and *Simplicity* is the result.
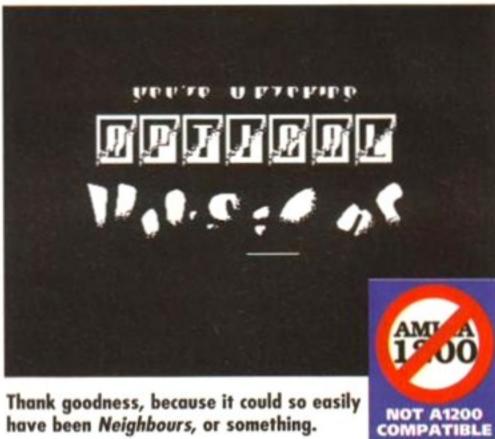
It sounds a lot like the Pet Shop Boys – fairly tame electrodance music, with lots of blips and pops and swirling keyboards, and a lead singer who doesn't sound unlike Neil Tennant. It costs £6 + 50p p&p, but the cover is reasonably well produced with a lyric sheet included.

OPTICAL ILLUSIONS
TELESCAN

DEMO

Thank goodness, because it could so easily have been Neighbours, or something.

NOT A1200 COMPATIBLE

Hang on a mo. *Pong*? For a second there I thought I'd grabbed the Dirty Rackets (see PD Update) disk by accident, but it seems not. Although it starts off with the familiar bat'n'ball screen so dearly loved by millions in the mid-Seventies (hmmm...), it quickly zooms into a typical megademo with 'slimy' Glenz vectors, more vectors, and a boppy soundtrack. Oh, and some more vectors to boot.

CLAUSTROPHOBIA
MAGNETIC FIELDS, DISK DE143

DEMO

Perhaps the title comes from the feeling you get when locked in a shaded room with this demo, I don't know.
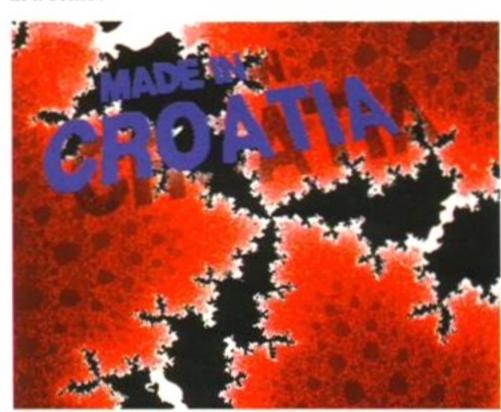
A bog-standard demo from Future Mirror, with lots of swirly vectors and plasma effects which look exactly like what happens when your TV goes wrong. The different parts of the demo are loosely strung together in a kind of story about brain scanning and DNA-altering, but the music's kinda nice, though.

MADE IN CROATIA
EXPRESS PD DISK A483

DEMO

This demo, strangely, was actually made in Croatia. I'm not sure how many Amigas there are out there, but then Binary are as good as most other coding groups.

There aren't any incredibly astounding features, but it's competent – glenz vectors, lots of dots, and things whirling around the screen. What more can you ask for in a demo?

Forgive me if I'm wrong, but I don't think we have had a demo from Croatia before – keep 'em coming, guys.

TOP TEN DEMOS OF THE MONTH

Just so that you know what's in and what's not we ask a Public Domain library to tell us the numerical order of the flavours of the month...

VISAGE COMPUTERS

1	Kefrens' *Desert Dream*	D169-170
2	Rage's *Alchemy*	D177-178
3	Kefrens' *Dane*	D176
4	Bait Masking 2Mb	A96
5	Mayday Resistance	D153
6	TRSI's *Misery 2*	D173
7	Simply the Best 32	STB 32
8	Jetset's *Blackbox*	D180
9	Spaceballs' *State of the Art*	D141
10	*Jesus on Es*	D124-125

WHERE TO GET THE DISKS IN THIS ISSUE

DISKOVERY: 0274 880066

TELESCAN: Handsworth Road, Blackpool. 0253 22296

Cynostic PD: 85 Wyken Croft, Coventry, CV2 3AD. 0203 613 817

NBS: 1 Chain Lane, Newport, Isle Of Wight, PO33 2QQ. 0983 529 594

PD SOFT: 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. 0702 466 933

Workbench

If you're looking for some simple answers to your complex queries, **Pat McDonald** is the bloke to ask.

MULTIPLE CHOICE
FROM: DAVID STROUD, HAMPSHIRE

I am a 16-year-old in a bit of a quandary until my exam results come through. I am thinking about a career, and my trusty A500 Plus, printer and second drive. Until a few months ago I was set on journalism as a career, perhaps writing for a magazine like yours. But recently I became aware that there are a lot of things the Amiga can do – desktop video, music and animation. I'm good at English and music. I've got *Deluxe Paint IV* and I love animation and painting, and I have started to mess around with a video camera too.

My A500 Plus seems a bit slow nowadays, and I've been considering an A1200. What do I go for in terms of hardware, so that it will give me as wide a choice as possible for expansion? Obviously I want a hard drive (is 85Mb large enough?) and like everyone else, want to produce professional results without spending a professional's budget.

Should I stick with the Amiga, or go for another machine that does one specific thing like a Macintosh for writing?

Art packages like DPaint IV are fun, but it's the experience and expertise you pick up that can earn you some cash.

When you're 16, it seems that the decisions you make 'fix' you in life. The reality is that you go on making decisions and changing your life all the time. When I was 16, all I wanted to do was program. Years later, I realised that I just wasn't good enough to make much of a living from programming.

You talk of a 'professional budget' – it's not just a question of spending a fortune and getting an instant result. It takes time and effort to create the smallest part of a computer project. It's not just what you have, it's also what you do with it. The smaller your budget, the more effort you have to put in to get a result.

Work out the size of the biggest individual program you want on your hard disk, triple it, and that's a minimum size. I've soldiered on with a 40Mb hard drive for years – I just have to clean it up frequently.

It seems that you hope what you are doing now will lead to a career, but you don't need a word processor to be a writer, or a paint program to be an artist. You need creativity – your talent is far more likely to get you a job than your computer.

The important thing is to finish things – written essays or short stories, songs, animations, whatever – unless you have finished work to show to a possible employer, you are an unknown quantity.

A dedicated word processor will save you the temptation of playing games rather than banging out some text. But I'd rather type on an Amiga rather than a Mac. Mac's were designed for people who know zero about computers. They're far too 'nice' for me.
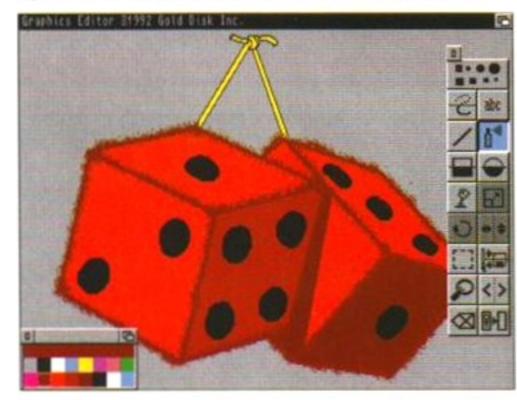
PRINTING FROM PAGESETTER
FROM: ROBERT GORMAN, GLASGOW

I recently purchased a copy of *PageSetter 3* to run on my A500 Plus with twin floppy drives. After going through the floppy disk installation procedure as directed by the program, I tested the printing. To my dismay, up popped the message "Could not open printer.device". After a lot of messing around I realised this was due to a lack of a printer.preferences file. The following is a description of how to correct the problem.

I found that more space was required on the *PS3* Install disk. Working with copies of the original disks I found the best method was to use Workbench, to copy files and make more space. Do all changes on copies of the disks, not the originals!

Boot the computer using a copy of Workbench. Insert the working copy of the *PS3* Install disk, and double click on its icon. Select Show/All Files from the Window menu, then click once on the Hard_Drive_Installation icon, to select it. Select Delete from the Icon menu – this makes some space on the disk. Then double click on the Devs drawer, then the Printers drawer, and delete the Generic icon in a similar manner. Keep the Printers window on screen, but close all other windows.

If you already have a suitable driver on your Workbench disk, then double click on the Workbench disk icon. Otherwise, put in the Extras disk (Workbench 2) or the Storage disk (Workbench 3) and double click on its icon instead. Select Show/All Files from the Window menu, open the Devs drawer and then the Printers drawer. Click on and drag the driver you want into the still open Printers window from the *PS3* Install disk.

PageSetter 3, one of a few recent releases that are tricky to get working properly from a floppy disk.

WHICH? VIDEO
FROM: B V KENT, WALSALL

With the November issue of *AF* you supplied *TV*Text*, the easiest video titler available. I had not long had a camcorder and thought that this would be a brilliant way of putting some finishing touches to my videos before sending them off to my brother in Australia.

I managed to set up the program and got some wonderful titles, but I couldn't find any instructions for getting the titles on to video tape. What leads go where? Do I need to record on to a different video tape or what? Please don't go into major expense like genlocks.

Yes, you do have to record the video on to a different piece of tape. First you record the bits from your camcorder on to a video tape, leaving a blank bit at the beginning and end for your titles. Then you connect the signal that your Amiga is displaying into the back of a video recorder. Then record your titles on to the tape.

When you play back, you will see the title, then your video footage, then your end title. If you want more than a beginning and end title, you will have to

The A520 modulator has a phono socket for connecting straight to a video recorder. More recent Amigas have a colour video out socket built into the machine.

leave the spaces in the appropriate length of tape.

How you actually wire the connections depends on what Amiga you have. If you have a TV connected to your Amiga, then unplug the cable out of the back of the TV and into the back of the video.

However, this isn't the best way to do it. The A600

Composite Video

An electrical connection where all the components of a video signal (colour and brightness) are sent down a single length of cable. Usually a shielded ground around the main core is necessary.

*TV*Text is one of the many programs dedicated to putting messages and patterns on the screen, ready for a video recorder to tape them.*

and A1200 have a composite video connector. This connector can be wired up to the 'Video In' or SCART socket of a video recorder, and will give a cleaner signal for the recorder. The A500 (Plus) and A1500/A2000 have a composite video connector too, but it is black and white only.

Then double click on the Prefs window on Workbench (it always lives on Workbench) and drag the Printer and PrinterGFX icons into the Printers window on the *PS3* Install disk. *PageSetter 3* should now install correctly.

Thanks very much for taking the trouble to work it out.

NO SOUND INPUT

FROM: ANDY SIMPSON, BLACKPOOL
I have had an A500 Plus with 2Mb of memory for the past 18 months. The problem is I recently borrowed a friend's sound sampler. After plugging it in with the computer switched off, I tried to sample various things from my hi-fi, and also from a guitar and music keyboard. The only result I got was a horribly distorted sample from the hi-fi with the volume turned up full.

I know the Technosound Sampler works fine for the person I borrowed it from. I tried a parallel printer – no joy from that either.
1) Could it be something to do with the CIA chips?

Yes possibly, but it could be something else as well. Because there are two CIA chips in your Amiga, you could try swapping them around to see if the problem goes somewhere else. If you've never taken a chip out before, this is a bad place to start – you could damage the computer beyond repair.

The 8250 CIA chip is easy to check on old, out of warranty machines. Take out and swap the two chips – if your problem moves elsewhere, one of the chips is at fault.

2) How much would one cost and where would I get one from?

One 8250 CIA (Complex Interface Adaptor) will set you back about £10. Dart Electronics (0533 470059) sell them, but plenty of other companies do too.

3) Because I have never used the port before, could I get a Commodore repair for nothing?
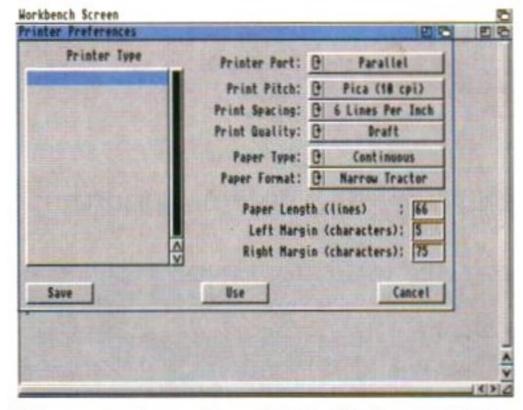
No chance. The warranty of a machine covers you for a year. Sure, the port could have blown up before that – maybe it was never right in the first place. But you haven't got a legal leg to stand on.

4) Finally, do any samplers use the serial port?

No. Datel produce a sampler which plugs into the righthand edge connector of either an A500 or A500 Plus, but when we tested it way back in *AF24* and it only got 43 per cent.

THAT BUG AGAIN

FROM: OSMAN SATTAR, LONDON
I have an A1200 with a Canon BJ10e printer. My problem is that I cannot get the printer to print anything but plain text. I copied the BJ10 printer driver from my storage disk into the Devs drawer

When running from a floppy disk, the Workbench 3 Printer Preference tool does not recognize any drivers you have copied from the Storage disk to the Devs/Printers drawer.

on my Workbench disk, then deleted the Generic driver that was already there.

However, when I loaded the printer preferences program from my Extras disk, the BJ10 driver was not listed there! Not wanting to give up, I turned on my printer and double clicked on the Initprinter icon in the Tools drawer of the Extras disk. I then loaded *TransWrite* and tried to print a document containing bold, italic and underlined text, but it all printed out as plain text.

There is a bug in Workbench 3, which prevents the machine seeing just what you have copied into the Devs/Printers or Devs/Keymaps drawers. It doesn't happen if you have a hard drive. All you have to do is click and drag the relevant Preference program from the Prefs drawer into the RAM 12-0999——disk, and then run the copy of the program that is in the RAM disk.

STARTING OFF

FROM: SIMON COLLIER, TYNE AND WEAR
I am trying to start up a disk magazine, and have a couple of questions to ask.
1) I would like to write to companies like DMA and Sensible Software. I can't find their addresses anywhere. Why is that?

Most companies prefer to deal directly over the phone instead of having to respond in writing. And if you have their phone number you can always ring up and ask for their address. We rarely print addresses because a phone number takes up much less space, but this time we'll make an exception. DMA are at Discovery House, Dundee Technology Park, Dundee DD2 1TY, and Sensible Software are at 2 Station Approach, March, Cambridgeshire PE15 8SQ.

2) I am considering buying the Vidi-Amiga 12 video digitiser. I understand that it takes about a second to grab a full colour frame. Does this mean I must have a video with a frame-by-frame play where you press to advance a frame at a time, or will the device slow down the video so it can digitise a sequence of frames automatically?

It means the picture has to be paused for a second. The digitiser doesn't automatial!y control the video player – you have to do that manually.

3) Also, I need some articles for the disk magazine. Since I cannot afford to advertise, could you ask your readers if they would send their work to me please?

OK, but only this once. If you have any articles, pic-

tures, sound tracks or anything else finished on a disk, send it to 3 Holburn Way, Ryton, Tyne & Wear, NE40 3RT for possible inclusion on a disk magazine.

Check out the full review of the latest version of Vidi Amiga 12 on page 112 of this magazine!

IN SEARCH OF SOURCE

FROM: JAMES ANDREWS, KIRKCUDBRIGHT
I am very keen on programminng my 1Mb A500, having played around for about seven years on a very old VIC 20. I have programmed in Z80 and 6502 Assembly language, but find the Amiga a most complex machine – I am having real trouble getting to grips with both the hardware registers (for controlling the hardware) and also with AmigaDOS.

Could you recommend some decent machine code books on the subject? I am aware of the official *Addison Wesley Hardware Manual* and the *AmigaDOS ROM Kernal* manuals, but they seem a bit expensive for what I have in mind.

They are expensive but they are worth it, especially the hardware manual. However, they are written in a way that assumes you know an awful lot about computers, and they do not, as yet, have any information about the AGA chip set.

If I really wanted to get into programming the Amiga directly, I'd buy some of the Amiga Coder's Club disks. These are dedicated to machine code programming, giving plenty of examples as to how you address the hardware correctly. There are plenty of other disks in the Public Domain with examples for would be MC programmers too.

You can get ACC disks from Amiganuts United on 0703 470017. The owner of Amiganuts is now Mark Meany, the guy who put the ACC disks together. Ray Burt-Frost, the former owner, does not have anything to do with Amiganuts anymore, but has retained distribution of certain programs like *OctaMED Pro* and *AGene*. He can be contacted on 0703 785680.

HOW FAST?

FROM: SIMON SHORROCK, SKIPTON
I bought an A1200 because I wanted graphically intensive games to run faster. *Formula One Grand Prix* is my favourite game, so I was disappointed to find it was only about twice as fast as my old A600. This detracts from the 'five times faster' claims I've seen. Will there be an A1200 version of the game?

Such inflated benchmark results of the A1200 are when it is fitted with a trapdoor RAM expansion, which gives four point something times the speed of an A600. It's to be expected that advertisers round this upwards. However, this is not a standard item that you get with the machine – read the small print. An A1200 version? Possible, but don't hold your breath. Companies like MicroProse need a larger AGA market.

Amos Answers

Frustrated with AMOS? Want to give up? Well, see if **Pat McDonald** can sort out your conundrums.

GOING PRO

FROM: TOM ROSE, GERMANY
I am thinking of buying *AMOS Professional*, but would like to know a few things before I spend my hard earned cash.

1) Is *AMOS Professional* compatible with all Amigas?
Yes, but it needs at least 1Mb of memory to work.

2) Does it support the AGA chip set?
The current version does not. I understand that Europress Software (0625 859444) have been bombarded with requests for such a version, but as yet it hasn't been produced.

3) Can I use the compiler with it or do I need an *AMOS Pro* compiler?
You need the *AMOS Pro* compiler, which was released at the end of June. The *AMOS Pro* compiler can compile ASCII, *Easy AMOS*, *AMOS* and *AMOS Pro* code.

I WANNABE

FROM: DAVID ONUBA, WALTHAMSTOW
I need help in using *AMOS* – I am having difficulty constructing and assembling programs. I think it's because I don't know the basic language commands and where to put them.
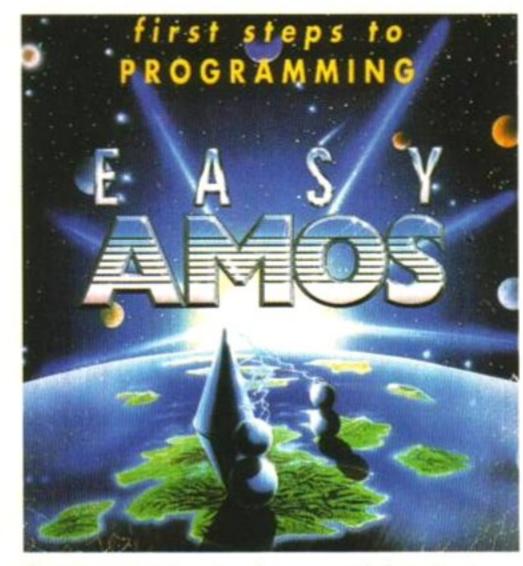
I have had my A500 for nearly two years and my friends who have *AMOS* laugh at me because I don't know how to use it. I feel really stupid because it says in your magazine that it's so simple to use, and yet it frustrates me totally.

1) I can't even begin to create good graphics. I've tried using *DPaint*, but just can't get the hang of it. I load *Deluxe Sprite IV* and I get stuck on the series of basic commands that are needed.

You are trying to run before you can crawl. *AMOS* is 'relatively' simple, next to machine code. It is based largely on the *BASIC* computer language, used by beginners for years. I think a large part of your problem starts from not knowing anything about *BASIC* or computer languages in general. The *AMOS* manual certainly assumes that you can program in *BASIC*.

Nothing But AMOS is a new disk magazine to help new programmers. It cost £2.50 from Neil Wright, 39 Riding Dene, Mickley, Northumberland NE43 7DL.

If you've never programmed a computer before, *Easy AMOS* explains the basics.

My first piece of advice is, stop trying to write a game. You can see the finished game in your mind, but to make it real means more work than you imagine at the moment. Look at different samples of *AMOS* code, and be prepared to learn very hard.

Second, after you have loaded in an *AMOS* program, you must click on 'Run' before anything starts working. You probably want a disk that automatically loads, but don't think about that until you can use the *AMOS* editor to a certain extent.

Third, get some squared paper and a few felt tip pens. Draw your graphics on the paper first, in pencil, getting the shape and tone looking good. Ink in the outline, and then, using the Magnify mode, draw the outline in *DPaint*. Working with squared paper will give you a feel for how pixels and colours look on the screen – it's too ambitious to go straight to a computer!

2) Could you give me a list of the commands for *AMOS*? What I am trying to aim for (apart from a game) is a tiny program to fit on a bootblock of the disk. I am not trying to write a virus, but I would like to get to grips with bootblocks too – examining them, installing them, and creating them. Is this possible with *AMOS*?

If you want a full command list, then get the manual from our Mail Order on page 144. There's just too much information in it for us to print a command list – and you need something more than that. You could also buy a book (not necessarily a new one) on *BASIC*, written for beginners. There are quite a few of these in secondhand bookshops – something like *30 Hour BASIC* by Fred Harris will teach you a lot of fundamental things, like what variables and constants are, how to do a loop, and how to build an array.

You also need to study the code. Don't expect to learn it all in one day, one week, or one year. Don't dream of becoming a crack programmer who makes millions. Do it for fun. If any of your friends have access to a printer, ask them to print out some listings

for you. It takes pratice and more practice. Bootblocks are very small machine code programs, so there's no hope of putting an *AMOS* program (even a compiled one) on to a bootblock. To read and write bootblocks, you have to know how to use the AmigaDOS program libraries – there is no direct *AMOS* command to do this.

FONT FIXERS

FROM: SIMON READ, MILTON KEYNES
I am having trouble trying to get fonts to work in my *AMOS* programs. I have copied some Workbench fonts to the fonts directory of my program disk, but *AMOS* fails to acknowledge them. I have tried using Fixfonts on my program disk but it doesn't cure the problem. Can you tell me how I can get a different font in my *AMOS* programs?

You do have the Diskfont.library file present in the Libs directory, don't you? Without that file, *AMOS* cannot read fonts from disk, since it contains the subprograms to actually do the job.
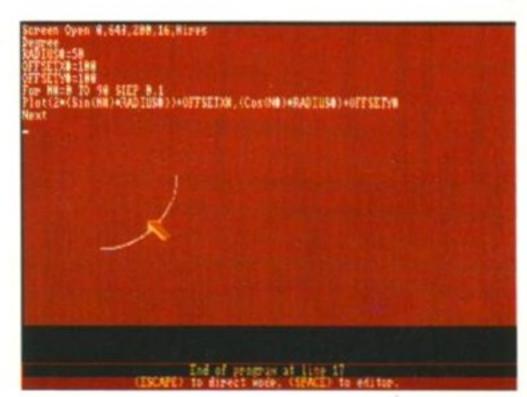
ARC SEARCH

FROM: DAVE MCKAY, PUDSEY
I am attempting to create graphics with maths rather than a paint program. I use *AMOS Professional* and have come across a problem. How do you program an arc, rather than a complete circle? I have tried the Circle command, but that draws a whole circle. Plot seems a bit long winded.

Using a lot of individual Plot commands is long winded, but if you use a loop and a couple of maths functions, then it's fairly easy. Something like this should do the job:
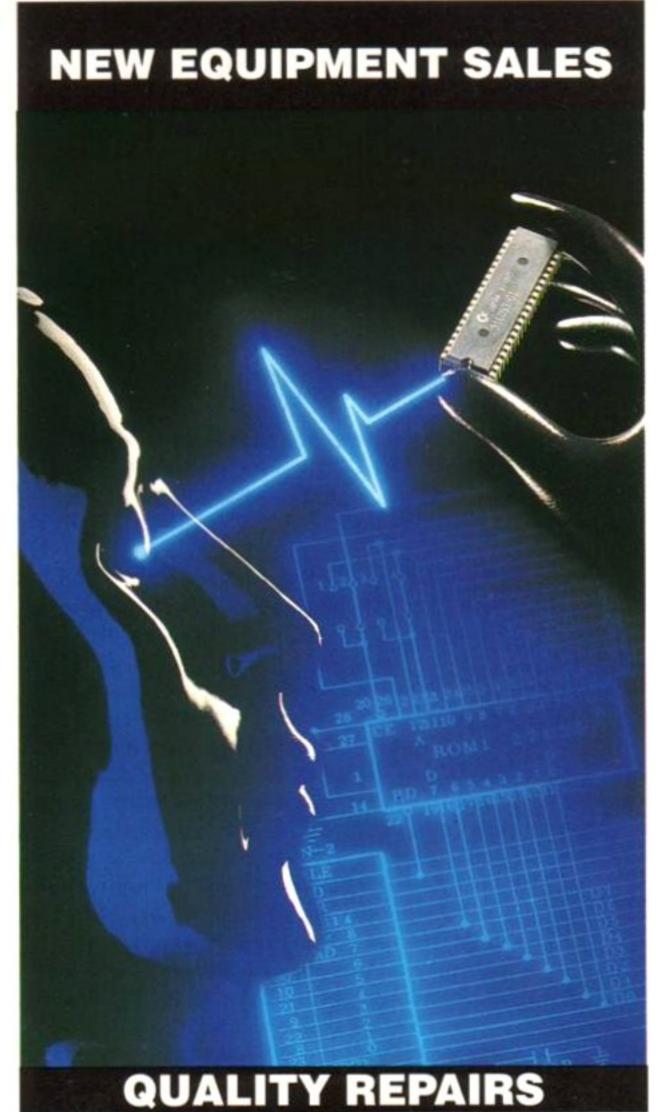
```
Degree
RADIUS=50
OFFSETX=100
OFFSETY=100
For N=1 To 90
Plot (Sin(N)*RADIUS)+OFFSETX,
(Cos(N)*RADIUS)+OFFSETY
Next
```

This may look the same as the published listing, but it's been changed to use fractions and high resolution graphics.

First, the computer is set to work in degrees of arc, rather than radians. The Radius of the arc, and the offsets from the X and Y coordinates are also set – changing these will produce arcs of different sizes.

Finally, the For/Next loop actually plots the arc on screen. If you wanted an arc to go in a different direction, then the loop would have to go from 91-180, 181-270 or 271-360 rather than the example of 1-90. Oh yes, and if you have two values for the radius, you can plot ellipses rather than circles.

N.B.AMOS ARTICLE VIEWER screen caption (onscreen menu: CLOSE CURRENT ARTICLE, MAIN MENU)

Q I know that 32-bit architecture will give you a palette of 16,777,216 colours (less actually on screen), but does a 24-bit graphic card give that many colours on screen?

24-bit is about fine colour resolution - having enough blues and greys to make a computer generated whale look real.

A To actually display that many colours on a screen at once, you would need a screen made up of a 4,096 x 4,096 pixel grid. A 24-bit true colour card lets you put any colour on any pixel, giving computer graphics a quality that can be used for television and video work - a resolution of about 740 x 600 is usually fine for this purpose, although specifications differ slightly from board to board.

The point of having a 32-bit display rather than a 24-bit display is to mark out certain areas of the screen for different purposes. For instance, marking out areas for a separate video image to be displayed over those pixels.

One feature usually provided by 32-bit displays is called Alpha-channelling. The facilities that it provides make a broadcast display even better. Such a card is the Harlequin. It is rather expensive, and is for the high end Amigas, but you will find that it is of the highest quality, and is available from Amiga Centre Scotland (0896 87583).

The 32-bit AGA chip set is basically a budget approach to achieving these sort of graphics. Although you can choose any of the 16 million or so colours, you are limited as to where you can put a given colour on screen, beyond a preset limit – unlike a professional graphics card. The extra bits are used for genlocking external signals over the display. (By the way, the whale was drawn by Richard Baguley.)

Q What does the Newtek Video Toaster do? Is the OpalVision Roaster chip the same?

A Think of two sequences of moving video pictures that you want to join together. The bit where they are joined is called a cut if there is no transition, and a wipe if there is. You may want to fade down to black after the first sequence, then fade the next sequence in. Or you may want to superimpose the second video over the first, then fade the first out.

This sort of thing is what the Video Toaster was designed for – to give as much flexibility for wipes as possible. That's not all it can do, not by a long way. The Toaster also has a 24-bit true colour display, for producing broadcast-quality stills and animation – just as OpalVision does.

However, the Video Toaster does not work on PAL videos, the standard used in the UK, most of Europe and Australia. OpalVision works on both PAL and the American NTSC standard. So there are quite a few people eagerly awaiting the arrival of the OpalVision Roaster chip.

The Video Toaster is essentially a 24-bit display card optimised for (American) video use.
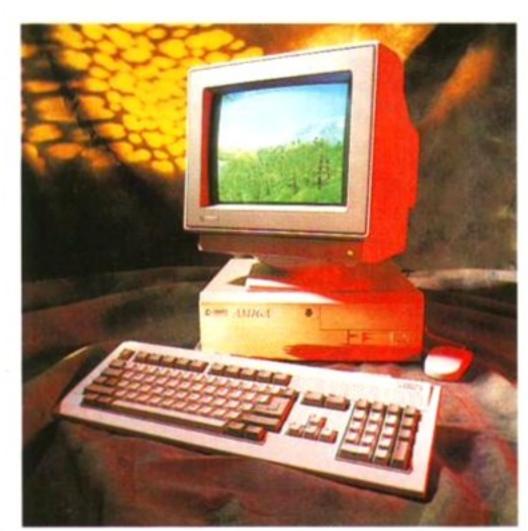
Answerfile

Pat McDonald gets his 'starter for 10' and then some, as he answers more of your queries about the techie side of the Amiga…

Q I want to get my hands on an A1200 with an 80Mb hard drive, but would it be worthwhile waiting a bit for the AA+ and AAA chip set versions?

A Probably not. If Commodore were to release an A1200 with yet another different set of graphics chips, then that would confuse the situation totally. I would not expect to see an improvement on the AGA chip set for quite some time, at least at the lower end of the Amiga market.

Q I do a lot of work with serious applications, and so I'd like to know which is the better buy, an A4000/030 or would I be just as well off with an A1200?

Which to buy? An A4000 or an A1200? It really depends on whether you intend to get extra hardware or not.

A Not really. The reason for buying a desktop or 'boxed' Amiga is that it's a lot easier (and cost effective) to expand, since it has card slots inside it. If you don't intend to get extra hardware, then you are probably better off getting an A1200 with a hard drive and some fast RAM.

Q Which is the best hard drive around for the A1200? Why are some advertised as 'Commodore approved' – are these the best?

A If you have your hard drive fitted by Indi Direct, Calculus or Silica Systems then Wang will still repair your Amiga under warranty, should a fault occur. This means that if you have a hard drive fitted by a company other than the aforementioned, and your computer then breaks down, its warranty is void and so Wang will not come and repair it.

We have heard stories however, of Wang engineers actually repairing Amigas that have been fitted with hard drives with warranty seals broken, as long as the problem hasn't been related to the hard drive being fitted. So it doesn't seem to make much difference, but perhaps it's worth getting a drive fitted by one of the three purely for your peace of mind.

Q I'm considering compiling a number of PD demos incorporating digitised animations and stills from feature films. Is this legal?

A It is only legal in two circumstances. The first is if you have permission from the copyright holder of the film (usually the film studio). The other is when you take clips from promotional trailers of a film – promotional material may be freely copied and distributed unless it has a copyright message of its own.

Q Where can I get a numeric keypad emulator to produce work in *Deluxe Paint*?

A From PD libraries, such as NBS, who will provide an A600 keypad emulator for £2.50, including postage and packing. Contact them on 0983 529594 – but if you want a keypad emulator for a different reason, make sure it will do what you want.

Q Would a hard drive or memory expansion improve the animation or smoothness of games like *Formula One Grand Prix*?
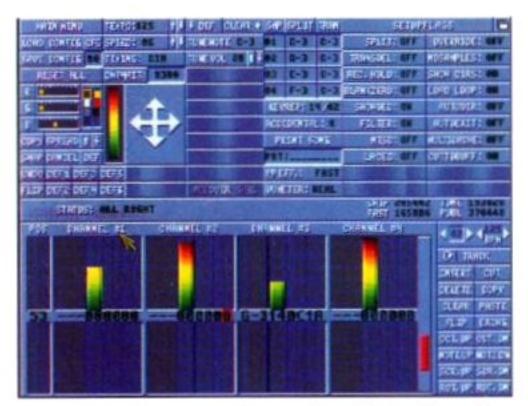
A A hard drive will not, though they do speed up the loading times, so you wouldn't spend so long waiting for the next bit of game to load.

As for memory expansions, it depends on whether you already have some fast RAM, and what Amiga you add it to. In the case of the A500, A600, A1500/A2000, the speed increase is small - maybe five per cent. But on the A1200 fast RAM added via the trapdoor results in a 100 per cent speed increase.

The best way to make a computer go faster is to change the Central Processing Unit (CPU) chip to a faster, more up-to-date version with its own slice of fast RAM. You can't do this to an A600 though, because the CPU is soldered in.

Q Do I need a memory expansion to uncrunch *ProTracker* modules?

ProTracker will automatically crunch modules and sound samples as it goes. However, the results may not decrunch on Amigas with less RAM than you have in your machine.

A When a file is crunched or compressed, the program doing the compression takes advantage of extra memory so it may help. If a file was crunched on a machine with more memory than a different machine, the module may not decrunch properly.

Q Do all samplers support input from all electric sound sources like guitars, bass and microphones?

A Yes, but you will rarely get a decent sample straight from an electric guitar. Samples work better with electrically amplified sound, through an amplifier, rather than straight from an instrument.

Q Are there any educational programs on PCMCIA card? If not, is it possible to copy programs from floppy disks on to PCMCIA cards?

A No there are not, but you can copy the contents of standard floppy disks on to PCMCIA cards that have been formatted with the *PrepCard* utility. However, make sure your card can be used as a disk.

Most educational programs will work from PCMCIA card, although you may need to assign all the floppies in the Startup-sequence file, which can be necessary when installing floppy software on to a hard disk.

If all this is Greek to you, here's how you do it. First, you need a word processor or text editor (*MeMacs* on the Extras disk will do) then you load the Startup-sequence file found in the S directory of self booting disks, and add a few commands at the beginning. Here's an example:

```
Assign Disk1: CC0:
```
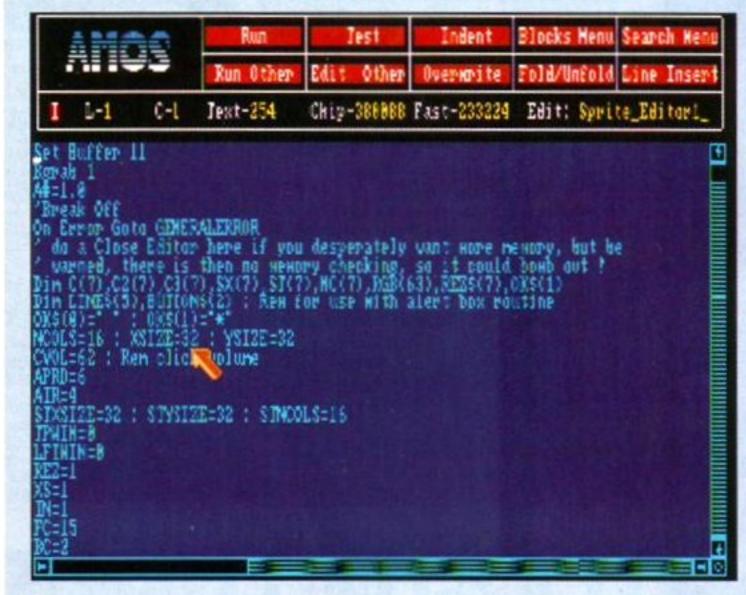
Every time the Amiga needs to read a file from a disk called Disk1, it will instead look at CC0 – the PCMCIA card. The Assign command must also be present in the C directory of your card. By the way, to copy all files from a disk called Disk1 to a PCMCIA card, use this, typed directly into a Shell;-

```
Copy all from Disk1: to CC0:
```

If you're not sure what a disk is called, the name of a disk appears underneath its icon on Workbench. Avoid putting spaces in disk names, as you then have to surround the disk name with speech marks:

```
Copy all from "Disk 1:" to CC0:
```

In-depth explanation
Programming

This is an *AMOS* program. Programming is less about typing in long lists of commands and more about designing logical solutions to a problem. If you're a programmer who can just bang code straight into the machine, all well and good. But most people, especially beginners, should concentrate on understanding how programs are built up from many smaller pieces.

1 Most people assume that programming a computer is simply a question of entering the right commands into a computer language, then getting the computer to run through the list of commands. This is not programming – the business of entering programs into a computer in a form it can understand is known as coding. It's just one stage of the programming process.

2 Programming has many different stages. The first one is the creation and design stage, where a program's purpose and operating standards are fixed. Usually, thinking of one program as a single entity is too much – the program has to be split up into many small segments, each with its own job.

3 The reason for this is that if you don't break down a program first, one or other elements will be too large for you to integrate later. For instance, a program to scan the contents of a disk seems to be a loop of scanning individual parts of a disk. The latter is extremely complex in its own right, so you first work out how to tell the disk drive to move to a certain track, then start reading the data, and finish in the right place.

4 There are many functions built into the Amiga that are specifically designed to do tasks like this. They are stored in the system libraries, some of which are contained in the machine's ROM chip, some of which exist in the libs (libraries) drawer on Workbench. Nobody says you ever have to use them, and many programmers simply ignore them.

5 However, just because you ignore the system library files, this does not mean that you should rewrite every program straight from scratch. As you program, you tend to have your own libraries of subroutines to do certain, specific jobs. If you want to program, say, image processing software, then there's not a lot in the system libraries to help you.

6 Another important factor to take into consideration, aside from figuring out if there are any existing program bits that you can use, is how much memory your program needs. Usually, programs don't take up much space at all. It is the data that takes up most of the storage – things like pictures and sounds are really huge in computer terms.

7 Using a tiling method is one way around the huge memory overheads that you get with some complex graphics. Each graphic screen is made up from a set of tiles. You can design each individual tile, and then arrange them to make up a screen. Although not as individual as drawing every screen in *Deluxe Paint*, it's much more compact to store a set of tiles and a map, rather than each individual pixel and its colour.

8 It used to be the case that a printer was always recommended for programming, to give hard copies of a program. However because computers like the Amiga have much larger memory and disk capacitie, this can result in extremely thick bundles of printout. Many programmers have adapted to the more limited viewpoint of a monitor, simply because it saves so much on printer costs.

9 Once a program has been coded into a computer language, the penultimate stage of programming is testing. Usually, a freshly entered program will do one of four things: it will work flawlessly (rare); it will freeze the computer in an infinite loop; it will apparently work, but fail later; or it will fail completely and produce random, spurious data.

10 Assuming that the program doesn't work properly, the final stage of programming happens – debugging – this is the meticulous process of going through the program by hand, and finding the mistakes. For beginners especially, debugging is the most time consuming part of programming. But it's a stage that practically all programs have to be put through. When you see a slick, polished program, that's not just a good programmer behind it – it's also a good programmer who is patient enough to find his mistakes.

Letters

Are you a boring, spotty, anorak-wearing social inadequate with no friends? Do you spend all your time cowering from real life in an imaginary computer fantasy world? No, we thought not. So why not prove it by writing us an interesting letter. Send it to Letters, **Amiga Format**, 30 Monmouth Street, Bath, Avon BA1 2BW.

KNIFE THE MAC

In July's issue of *Amiga Format*, Daniel Meuuws was having a problem choosing between a PC or an Amiga. I have a similar problem, but this time it is between a Macintosh and an Amiga. Could you please tell me the advantages of an Amiga over a Mac, say the LCII or LCIII at an educational price.

The problem is that both these computers seem better than a PC and they both tend to be used in similar places. If you think the Amiga is better, could you please tell me whether there is any point in buying a Macintosh Emulator?

Andrew John Mas, Hatfield

Rather predictably, we think the Amiga is the better machine, if we didn't we'd all be working on our sister title, Mac Format. *The main reason comes down, once more, to price. Although we would agree with you that the Mac is a far superior machine to the PC, and accept that Mac prices have plummeted recently, they are still pretty expensive. An LCIII with 4Mb RAM and an 80Mb hard drive plus a 14-inch colour display will cost you around £1,000. An A4000/030 4/80 with a 14-inch colour display would be more expensive, at around £1,300. Both machines run a Motorola 68030 chip at 25Mhz, but the Amiga has the advantage of the custom chip set. So all in all that's a fairly even match so far. Your LCIII will display up to 256 colours, your A4000/030 will display 262,144.*

Now down to the important stuff, software!

Quark XPress for the Mac will cost you £795, ProPage 4 on the Amiga will cost you, £199.95. Presenter on the Mac will cost you £1,225, Real 3D2 on the Amiga will cost you £400. Macromind Director on the Mac will cost you £899, Scala MM200 on the Amiga will cost you £460.

It soon becomes apparent that unless you're earning a huge salary, the Amiga is the better buy. But the

Mac is a good machine, and the interface is the peak of computer user friendliness. The Emplant Mac emulator, reviewed in AF48 (85 per cent) is a great way to get the best of both worlds.

DRIVE HARDER

As a recent addition to the world of computing, via the Amiga 1200, one facet of being the lucky owner of this magnificent machine perturbs me. Why are IDE drives so expensive for the Amiga when compared to PCs?

On average, hard drives cost £1.50 per meg for PCs and a massive £3 plus for the Amiga. I understand that there is a difference in size, but should this change the price so dramatically? If so, why did Commodore not use the cheaper 3.5-inch version? Please don't tell me 'because it won't fit in the case' since Commodore designed the case. Is it possible there was some kind of nepotism with GVP to supply the smaller size of hard drive, because I have yet to find an advertisement in magazines indicating anyone else supplying this product.

G A Alexander, Irvine

The reason for the difference in price is simply one of supply and demand. There is a world shortage of 2.5-inch drives, and so they are expensive. On the other hand, 3.5-inch drives are plentiful, and are therefore cheap. You are wrong in assuming that the cheaper 3.5-inch drive won't fit inside your machine, though. Look through this issue for the Software Demon advert, and look at their prices. Pretty cheap aren't they? That's because they have developed a way of squeezing the bigger unit inside the A1200.

On your last point, I just don't understand what you mean! Firstly, GVP and Commodore are totally separate companies and there is little chance of nepotism between them. Secondly, GVP don't supply any 2.5-inch drives for the A1200.

TRAITOR POWER

Normally, *AF* has struck me as a solid 'console-toy' bashing kind of a magazine, but a recent browse through the *AF Annual 93* proved rather disturbing. There I was gleefully reading the 'Behind the Scenes' article when I found a picture of the then Art Editor, Marcus Dyson which took me by surprise.

Far be it from me to criticise the dress sense of any member of the illustrious *Amiga Format* team (*oh, I don't know about that – Ed*), but there was old Marcus, bold as brass and wearing a Sega shirt. Adding insult to injury this very same shirt, offending logo now cropped, is still sitting on Ed's back in the introduction to the most recent copy of *Amiga Format*.

I realise times are hard, but surely some more suitable clobber is in order.

Shaun Ball, Gillingham

Well what can I say in my defence? I did it to shock? I did it because I don't earn enough to buy clothes, and have to wear freebies? I did it because my wife is Art Editor of Mega, *the world's most wicked Sega mag?*

All these are true and more! I did it because I own a Game Gear and I think that portable consoles are well wicked! Let's not get to emotional about these things, the Amiga is king, but all kids should have their toys – mine's a Sega.

This month's contents page should see a new me, with a tasty Gordon and Smith T-shirt on.

COMPUTER CHART

At school I overheard someone talking to a teacher. She said that the Apple Macintosh (which we use at school) was not a bad computer, but if you were really serious about computers the only choice was the IBM PC. Whereupon the other teacher said that her son had an Amiga at home and that it was 'OK for games but nothing else.' I had to bite my tongue as I nearly burst out in a fit of quoting prices and how the Amiga was every bit as capable a platform as any PC.

This just shows how bad the public's attitude to the Amiga is. Business people don't want to be associated with the kind of people who use Amigas – the artists and musicians.

Robin Brown, Edinburgh

You make an interesting point Robin. Business people are rarely comfortable with 'creatives' and the Amiga is a creative computer. It doesn't matter whether spreadsheet users think the Amiga is a games machine, as long as people like Foundation Imaging are producing things like Babylon 5, *which show off the Amiga's true power.*

Let business people have their PCs, it's what they deserve. Anyone who honestly believes that the PC is the only 'serious' computer obviously knows so little that their opinions are not worth worrying about.

BABBLING ON

Oh My God! The *Babylon 5* feature – brilliant!

This article has got to be the best you've ever featured. It's great to see two Brits knocking them out in the states. The best of luck to foundation imaging in the future.

OK, so we can't afford a dozen 2000s and an IBM to control them with. But a few people with A1200s and a hired PC in a room for a week could be generating some seriously fantastic images. More on the Toaster please, and where can you get transcoding done. Someone somewhere must supply a transcoding service. I'm off to buy an A1200 now.

X

You don't need to use a Toaster and dozens of Amigas networked together to produce incredible quality 3D animations. Not unless, like Foundation Imaging, you have to produce several minutes of broadcast quality footage every week. A single A1200, a RAM expansion and a copy of Real 3D2 *could see you producing work the quality of which will shock all your friends rigid.*

As for Toaster transcoding, forget it! We are soon to see a version of the Toaster 4000 with an in-built transcoder card. We'll be reviewing it soon.

PIRATES AWAY

I have read that the PCMCIA card acts rather like a RAM expansion, the same source says that the PCMCIA is practically pirate proof. Now I know PCMCIAs are expensive, but if piracy is such a problem why can't they produce a much cheaper device which contains vital bits of code for games which would still run on disk? Surely with mass use the cost could be kept down and piracy could be nipped in the bud for the A1200 and A600 before people become discouraged from developing for them.

If this is unfeasible, why can't Commodore design an anti-piracy slot for their machines? For example a card that cannot be read by pirates, but contains vital information for the game. With the card available only to developers then an almost 100 per cent protection could be created. With this a similar protection to the likes of the consoles could be obtained.

Commodore must realise that as piracy reduces sales and hits the software industry, this in turn will affect them.

Myles Jefferey, Hernebay

Sadly, what you say about PCMCIA is incorrect. A PCMCIA card is in effect a ROM cartridge, and as the console manufacturers are finding out to their cost, carts are eminently pirateable. The truth is that any code which can be read into your machine is pirateable, whether it be from cart, CD, or disk. I am sure Commodore are fully aware of the threat this poses to the Amiga, but there is little they can do about it.

DEPECHE MOOD

Having noticed recent articles by Jason Holborn, I was interested to find that Mr Holborn (*we prefer to call him Jason – Ed*) is a Depeche Mode fan. I myself am a keen fan of the Mode and their indie label Mute. However, I feel compelled to write after seeing Jason's screen shot for *The Music Librarian* review. Mr Holborn (*we prefer to call him Jason – Ed*) is obviously not as keen as he makes out. *Songs of Faith and Devotion* is not distributed by EMI, it is by RTM/Pinnacle. I can see where he is getting mixed up, though – EMI publish the songs on the album.

Also any self respecting fan would know the Mute catalogue number CSTUMM106.

Please discipline Jason (*There! Now you've got it – Ed*) with whatever methods you use in your office.

Mat Smith, Stratford Upon Avon

Ah, it all becomes clear now. We wondered how Jason (as we like to call him) could make such an incredible social faux pas as to not know all the Depeche Mode catalogue numbers by heart. Although I must admit that I consider myself to be a devoted fan of Dinosaur Jr, but the catalogue number of their second album Living All Over Me *doesn't spring to mind immediately. We will discipline Jason most severely, the current method of choice is to force the incalcirant writer to listen to Depeche Mode records.*

SELL SAVED GAMES?

While looking through the PD ads, I noticed that there was something missing – saved games. For instance, you could sell positions in *Monkey Island I* and *II*, trickshots in *Jimmy White's*, huge empires in *Civilization*, sprawling metropolises in *Sim City*, etc.

Is this legal? If so I have many saved games including the ones listed above, plus *Lemmings II*, *Formula 1 Grand Prix*, *Speedball II* and more.

Richard Hewitt, Belfast

We've spoken to a couple of companies about this, and they seem to think that there's no problem. However, they do stress that you should not include files which are part of the actual game code – because this obviously infringes copyright.

What do the PD libraries think, though? Are there any PD companies out there who fancy giving it a go? Write in and tell us what you think.

FORMULA FUN

Many years ago in my 'Spectrum Era', I played away on a game called *Formula One*, into the small hours of the morning. It wasn't the car sim type – basically I was the manager, putting my cars on to the track raceworthy, betting on the outcome of the race to get more money for building my cars up, and simply sitting back

Classic by Bernard Kriek of The Hague, Netherlands.

New Age by Karl Moore of Birmingham.

Toad by Sarah Taylor.

MISLEADING INFORMATION

I am writing to express concern at being given blatantly false advice by a supposedly reputable company.

To explain: last week I finally decided to go ahead and upgrade from my A600 to an A1200. Having checked out a number of lists of software which would work with the A1200 I realised that all of the software I own would run on it. With the exception of *Legends of Valour* which didn't seem to be on anyone's list. I decided to ring US Gold for an answer.

The 'gentleman' I spoke to told me: "*Legends of Valour* will not work at all on the A1200 – in fact I wouldn't even buy another Amiga. We are only doing a couple more games for it so you'd be wasting your money."

Now I was a little taken aback by the vehemence with which this was stated, but I went out and bought an A1200 anyway. Was I wasting my money? Not bloody likely I wasn't! It's a brilliant machine – and more to the point, *Legends of Valour* runs on it perfectly at about twice the speed of the A600. In fact it runs so much better I've played it to death in the last few days.

So a word of warning: don't believe everything a software distributor tells you. And a word of advice: get an A1200. There must be plenty of other software houses who are less short sighted than US Gold.

Andy, Bristol

Your tale was particularly surprising to us Andy, because Bridgett Hirst, the communications manager for US Gold was in our office recently telling us how important the Amiga is to their market. She reappeared in our office to demo their new Amiga game, Blade of Destiny, just after I'd read your letter, so I tackled her on the subject. Not surprisingly, she was horrified to hear what you had to say.

Back in the US Gold offices in Birmingham, Bridgett did a little investigative work, but the misinformed and itinerant 'gentleman' you spoke to could not be identified. However, Bridgett had this message: "Following our conversation I spoke to a number of people in an attempt to discover who in US Gold had spoken to the customer, certainly it was no-one in PR as we're all female (although at times we do have gruff voices).

"Certainly the comments allegedly made do not reflect US Gold's attitude to the Amiga. As you are aware we are continuing to support the Amiga both with new titles and our Kixx and XL ranges.

"I can only apologise for the fact that Andy had cause to put pen to paper. Please ask him to ensure that he speaks directly to me on 021-625 3366 extension 2178 if he has any further queries."

So you see, not only are US Gold reputable, but they're very helpful too!
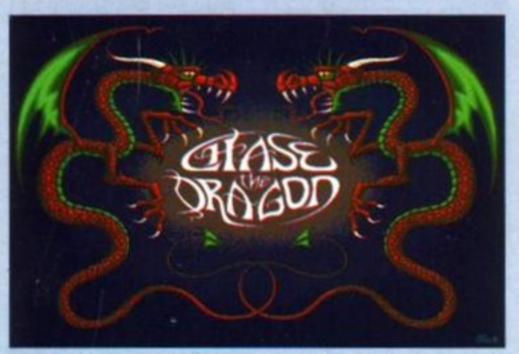
CD CONSOLE IS HERE!

I have just had a catalogue shoved through my door. I was flicking through the computer section when I stumbled across an Amiga 32-bit console!

What is going on? Where is the hype that such a radical advance in Commodore's market deserves? The lack of interest which seems to be surrounding this could mean that the console is not as successful as it should be.

T Clifford, Harrow

By now I'm sure you've read about the Amiga CD32 on this month's news pages. But if it's a surprise you can't have read your recent issues very carefully. We've speculated about the CD Console for months, but we can't go into full blown hype mode before we have any hard facts. The unfortunate appearance in the Grattans' catalogue was a slight scheduling glitch. Commodore wanted to keep the launch secret until the press unveiling, and the Grattans' appearance is the side effect of a launch delay. Now it's here it will get all the hype (and success) it deserves.

Next month
Issue 51
October 1993

SPECIAL 32 PAGE SUPPLEMENT ON

AMIGA CD 32™

The Amiga CD32 console is here! And we're giving it 32 pages of coverage in a special supplement to *Amiga Format* issue 51, so don't miss it!

We love the Amiga here in the *Amiga Format* offices (surprising that isn't it?). We love *Real 3D* and *VistaPro*, we love *Image FX* and *Wordworth 2 AGA*, we love *Directory Opus* and *Professional Page*. But at the end of a very hard, and very serious, day, there's nothing we like more than getting out the games.

Not surprisingly we're as please as pleased can be to hear the news of Commodore's new CD-based games console, so next month on top of the usual *Amiga Format* packed with news, games and serious reviews we're also putting together 32 pages on everything you need to know about this excellent new machine.

Not only will we be telling you exactly what the technology and what the machine's all about, but we'll also have our very own CD32 console, so we'll get some games and playtest the thing to destruction. We'll also be finding out what the software houses think of CD, the new console and what they're developing for it. Plus we'll have screenshots, previews and maybe even the odd review of some of the hot new breed of CD games. And we get paid for this… Easy life!

Waiting for you at your local shop from **Thursday August 26!**

and watching while the cars whizzed past on the high-lights – pausing only to change the type of tyres or repair the chassis in the pit stops. Simple, not too much to do and no tedious qualifying, etc. The best bit was when the screen border changed colour to announce that the leadership had changed hands! Anyway – everybody who has played this game reckons it was the best ever.

Therefore, at last, you may add…

1) Has this game not been recreated on the Amiga?
2) What, not even on PD?
3) Why not?
4) Do we need to lobby parliament to get something done or what?
5) What's for tea?

Chris Morris, Tadcaster

1) Yes, the game has not been recreated on the Amiga.

2) No, not even on PD

3) Erm, don't know? Maybe because the Amiga's advanced processing and graphical abilities have lead to driving games like MicroProse's Formula One Grand Prix *and* Vroom.

4) No, you just need to make an impassioned plea to all PD coders out there, through the letters pages of Amiga Format. Or wait a while until Chrysalis unveil their Formula One *management sim which they are currently developing.*

5) I'm having a Schwarz blue-cheeseburger and fries.

EX-SCSI ME

I own an A500 and would love to upgrade to an A1200, but I have also got a GVP A500HD8 hard disk (the one that fits on to the side of the machine). Having spent so much money on the hard disk, to spend it again on a new one seems a great waste of money.

So here is a plea to any hardware manufacturers. How about making an adaptor that would link the old hard disk to an A1200? With an interface costing between £20-50 it would be worth upgrading. Do any manufacturers have any comments on the idea?

Pete Bricknell, London

The adaptor you require is a SCSI interface, they are beginning to appear on the market, but sadly they cost a little more than your suggested price range. Both ICD and GVP have RAM expansion or accelerator boards for the A1200 which have a SCSI connector, but you pay quite a price for the board.

However, one thing to consider is the high resale value of your GVP HD8, when compared to the cost of a similar sized IDE drive for your new A1200. You could probably sell the GVP drive for around £100-150, whereas a 40Mb IDE drive can be picked up for as little as £100. And with IDE you have the added advantage of the disk being internal, and thus taking up far less desk space.

ONE CARELESS OWNER

I would like to buy the review A4000/040 from you. Reading an advertisement for it first whet my appetite. I then read the review of the A4000/030 and noticed the comparison in speed. So I flicked through some pages and was very impressed by the competition software. Then I had a crazy notion of buying the review A4000/040 for £200, and the review copies of the software for £100, in total adding to £300. I will have to pay £50 per month.

Master Jonathan Bruce, Kilbarchon

Sorry Jonathan, but we need to keep our A4000 in the

TASTY SNIP-PETS

Why do you say that a CD-ROM drive using the PCMCIA connector will be available for the A1200, but not the 600, because its PCMCIA slot does not offer the same degree of control. Surely all PCMCIA slots are built to the same specification?

J Rushton, Telford

We never said that there would be an A1200 PCM-CIA CD-ROM. In fact PCMCIA is exactly the reason that the A600 will probably not get a CD drive. The A1200 has the opportunity to accept a SCSI connector via the trapdoor port, and if a CD is to be connected, this is how it will be done.

As a slight aside. No, not all PCMCIA slots are the same specification, but that's another story.

I used to be a pirate. I have given up now and started to reformat my copied disks. Could I still be prosecuted?

Anon

Strictly speaking, until all your pirated disks have been erased you could face prosecution. But if you have seen the error of your ways, and you are actively getting rid of your illegal games, I'm sure FAST will leave you alone.

Well done, from all of us, we know going straight can be a difficult decision to take.

With so much interest generated by the current range of very cheap CD-ROM systems, wouldn't it be beneficial to do an in-depth study into the workings and possibilities of the CD Amigas?

Mark Passmore, Newtownabbey

It certainly would, and with the new developments in this area, you can expect something very soon.

YOU LUCKY, LUCKY...

THE COMMODORE/AMIGA FORMAT A4000 COMP
We had tons, hundreds, loads and masses of entries for our fabulous win an A4000/030 competition. And not surprisingly so either, since the prize also included a selection of the very best software available. In the end we counted all the entries, and we will be using that total figure as the basis of another competition soon. But for now, we will just content ourselves by telling you who the extremely lucky winner is. It really is time for a roll of the drums, here we go… the winner is a Mr D Wightman of Chester.

I WANNA WINNA PRINTER COMP
Three lucky readers will be printing their entries to future competitions on a shiny new Citizen 90 C colour dot matrix printer. Those three are Jonathan
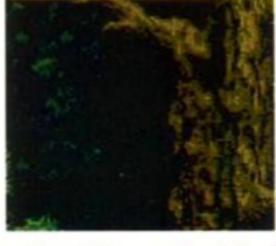
Amigas not only star in films like *Space Camp*, but also in Aussi soaps. In *Neighbours*, if you look closely at Paul Robinson's desk in his house you will see, what else but an Amiga!

Tim Richards, Swansea

Yes, we know. We've been told about 2,369 times. If you're a new reader, Tim, welcome. If not, you haven't been paying attention have you? The next person to tell us about Paul Robinson's Amiga will be sent a piece of the rotten fruit which our art editor Sue stores in her desk drawer!

I have just upgraded to an A1200. Having recently bought a copy of *DPaint IV*, I thought I'd do the decent thing and ring Electronic Arts for a quote on an upgrade to *DPIV* AGA. To my horror I was told that it would cost £50. I can buy a new copy of *DPIV* through mail order at £59.99.

I wonder why piracy is on the increase.

Ian Batley, Coventry

It did sound a bit steep, so we called Electronic Arts, and they confirmed that the upgrade does indeed cost £50. We really think that an upgrade price nearer to £30 would be fairer, after all they only have to replace your disks and manuals.

Come on EA, play fair.

I know it's hard to cram the many sections *AF* has into the magazine, but surely this shouldn't mean cutting off sentences halfway through.

Gavin Musk, Staines

I know what you mean Gavin, we don't try to end articles that way, but sometimes the image setter that we use reflows the text in a document and the

Grant of Bangor, Co Down; Hayley Denham of Cleckheaton and David Docherty of Salisbury.

8TH AIRFORCE COMP
The winner of the rather splendid Avirex flying jacket is Les Webb from Claygate, who also gets a copy of MicroProse's excellent *B-17*. Ten runners up also get a copy of *B-17*, they are: Mark Daniels of Hoveton, Lena Wright of Ryde, M Coleman of Stroud, RE Sutton BFPO 455, Andrew Harrold of Aberdeen, Cameron Hills of London, Daniel Atkinson of Kirkby Lonsdale, Stephen Baird of Thirsk, Colin McIntree of Colchester, and Christopher Stubbings of Eastbourne.
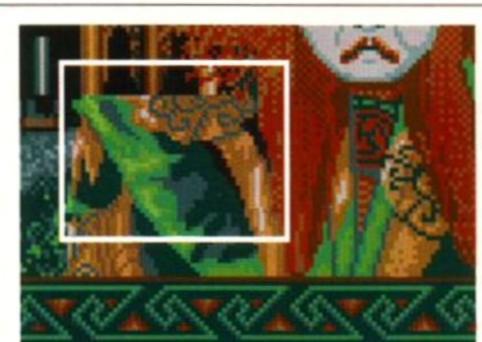
Congratulations to all those lucky winners, now turn to page 46 and win yourself a prize.

Spot the shot 50

Do you know which Amiga game this is a portion of? Then send us a postcard and you could win a T-shirt. Just put your name, address and the name of the game on the card and post it to us at the following address: Spot the Shot 50, *Amiga Format*, 30 Monmouth Street, Bath BA1 2BW. The first correct entry pulled out of the hat every month will win a fabulous *Amiga Format* T-shirt!

The winner of Spot the Shot 48 is Christian Ardern of Narbeth in Wales, who, like all the other people waiting for an *Amiga Format* T-shirt, will be very pleased to hear that they are virtually ready.

ADVERTISERS INDEX

TOP AF WORDS FOR THE SUMMER OF '93

1) **Gracilescent:** growing skinny or slim (unlike Marcus or *AF* Specials editor, Tim Smith)

2) **Dacryopyostic:** tear-producing. Much like the *AF* team's volleyball performance against Wordworth-makers, Digita.

3) **Bleb:** a bump, blister. As appeared on Steve – the Boy – Bradley's and Richard Jones' fingers after too much Sensible.

4) **Sleem:** as in "you crawling, bleening, screeling, sleem! You glinch! You splain! You irregelagious spong!". An average *AF* office exchange of views.

5) **Logorrhoea:** uncontrollable; usually uncontrollable running off at the mouth. See 6.

6) **Longaminous:** suffering stolidly, patiently enduring. As with Julie, Sue, Gary and Mr Bilbo Baguley in the face of 6&7.

7) **Misoneism:** the hatred of anything new. Expected reaction from one quarter of Amiga-users to the new 32-bit CD Amiga console.

8) **I'mgoingtoAustraliayouknowmelam:** an incessant stream from the editor's chair as Marcus left us for the World of Commodore in Oz.

On-lawn Amiga action?

Phew! Two weeks of dead-line and the Wimbledon fortnight to boot. Not that we get to watch it, but we try to keep in touch with the Amiga scene down Centre Court way.

The question on everyone's lips at Wimbledon was whether Barbara Streisand was upgrading to an A1200. Sources close to the Bolton-born singer suggest she may do before the year is out, especially if Agassi's *Tennis* becomes available for the Amiga.

Sampras and Courier sweat it out on Centre Court, as seen on our office TV.

Meanwhile Steve Edberg, the Yorkshire-born former Wimbledon champion has refuted allegations that he was offered a wild card for the recent *Sensible Soccer World Cup*. Said Edberg: "I'm a tennis man through and through, and anyway, I prefer *Goal!*"

Not just another hole in the wall

When you next use a bank cash machine, make sure it's a real one! Two men were arrested in Arizona for allegedly setting up a dummy 'hole in the wall' cash machine in a shopping mall. Unsuspecting shoppers tried to use this machine, which recorded their account details and PIN numbers. The two men then allegedly used this to make fake cards, and withdrew $100,000 from genuine cash machines. How were the two men finally tracked down? They didn't pay for the equipment they used to make the fake cards, and the company that sold it to them informed the police.

ALIEN GOBSTOPPER SHOCKER!

The Format crew are in immense danger according to 'health chiefs'. Beeee-you-dee-full Bath, proud home of *Amiga Format*, is being plagued by giant 99p gobstoppers!

Yes, the pleasant confectionaries of our home town have turned vicious. GobGate is causing fear among certain sweetie sellers who are concerned in case the elephantine sweets get wedged in people's mouths (they also seem to think that these things can become wedged in your throat, well possibly if you force them down with a rolled-up newspaper á la *Alien*). Deputy trading standards officer, Peter Hall, stepped up the fear-filled furore when he revealed: "People should be very careful about purchasing these things." You have been warned.

Now remember not to cross the road when one of those big metal and rubber things is heading towards you at speed.

SPELL CHEQUERS

A necessary evil, spell checkers are, so this month we decided to do an Actual Reality special on them.

MEAT THE TEEM

Spelling checker programs are notoriously bad with names. So we typed in the names of all the *AF* and *AF Specials* staff, and then ran the list through one of our favourite spelling checkers, here's what it came up with.

Marcus Dyson – Maracas Dossing
Julie Tolley – Jelly Telly
Stephen Bradley – Stiffen Broadly
Richard Baguley – Orchard Buggy
Jessice Bennett – Juices Bonnet
Gary Lord – Gory Lord
Pat MacDonald – Pat Maddened
Andy Nuttall – And Nuttily
Susan White – Assassin White

Tim Smith – Dim Smith
Andy Hutchinson – Hanky Tensions
Richard Jones – Recharge Bones
Sally Meddings – Sally Medians

But don't be put off, with most spelling checkers you can add your own words to their dictionaries, so you can teach it all your friends' names.

Actual Reality

The end of yet another issue, and we bring you more stories from the stranger side of life, which have actually happened. Honest.

THE MEN FROM UNCLE

Both Richard Baguley, (*Amiga Format* staff writer and bon vivant) and Tim Smith (*Amiga Format* Specials editor and gourmand) have been in the family way recently. Not that either of them have become daddies, but both of them have brothers who have. So congratulations to Tim and Dick.

Your guarantee of value

This mag comes from Future Publishing, a company founded just eight years ago but now selling more computer magazines than any other in Britain. We offer:

Better advice. Our titles are packed with tips, suggestions and explanatory features, written by the very best in the business.

Stronger reviews. We have a cast-iron policy of editorial independence and our reviews give clear buying recommendations.

Clearer design. You need solid information fast. So our crayon-wielders highlight key elements by using charts, diagrams, summary boxes, and so on...

Greater relevance. At Future, Editors operate under two golden rules:
- Understand your readers' needs.
- Then satisfy them.

More reader interaction. We draw on readers' contributions, resulting in the liveliest letters pages and the best reader tips. Buying one of our magazines is like joining a nationwide user group.

Better value for money. More pages, better quality – magazines you can trust.

Power Computing's innovative 4MB 32-bit memory expansion for the Amiga 1200 is now available. The PC1204 includes these many features:

Zero Wait State - Unlike some other expansions the PC1204 never leaves the processor waiting around for data, which means that your A1200 can run at its maximum speed.

Ultra Fast FPU - An optional maths co-processor speeds up intensive calculations. A 50MHz chip will speed up operations by up to fifty times.

Real-Time Battery Backed Clock - Allows files to be date-stamped with the correct time and date so that you know exactly when they were created.
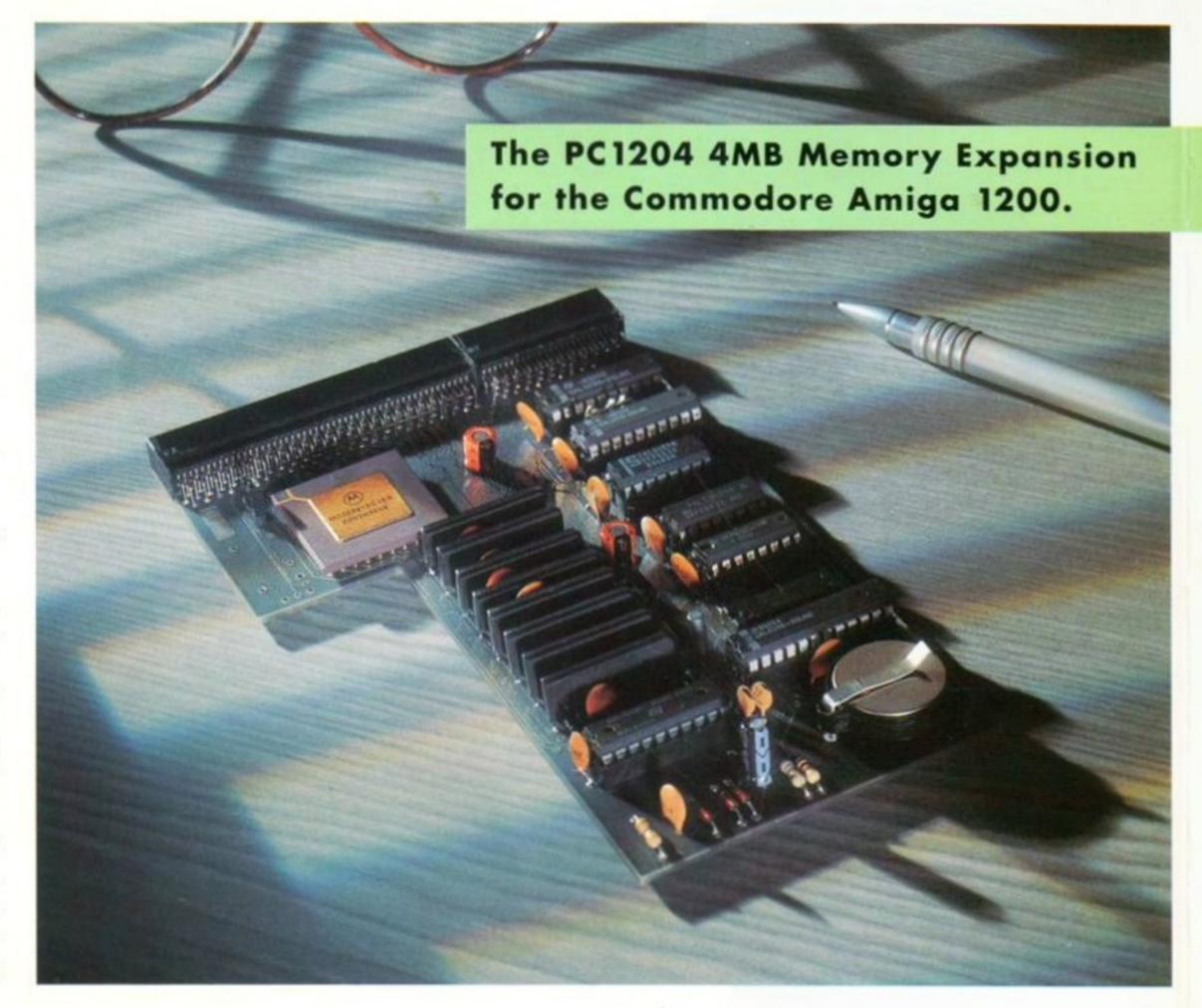
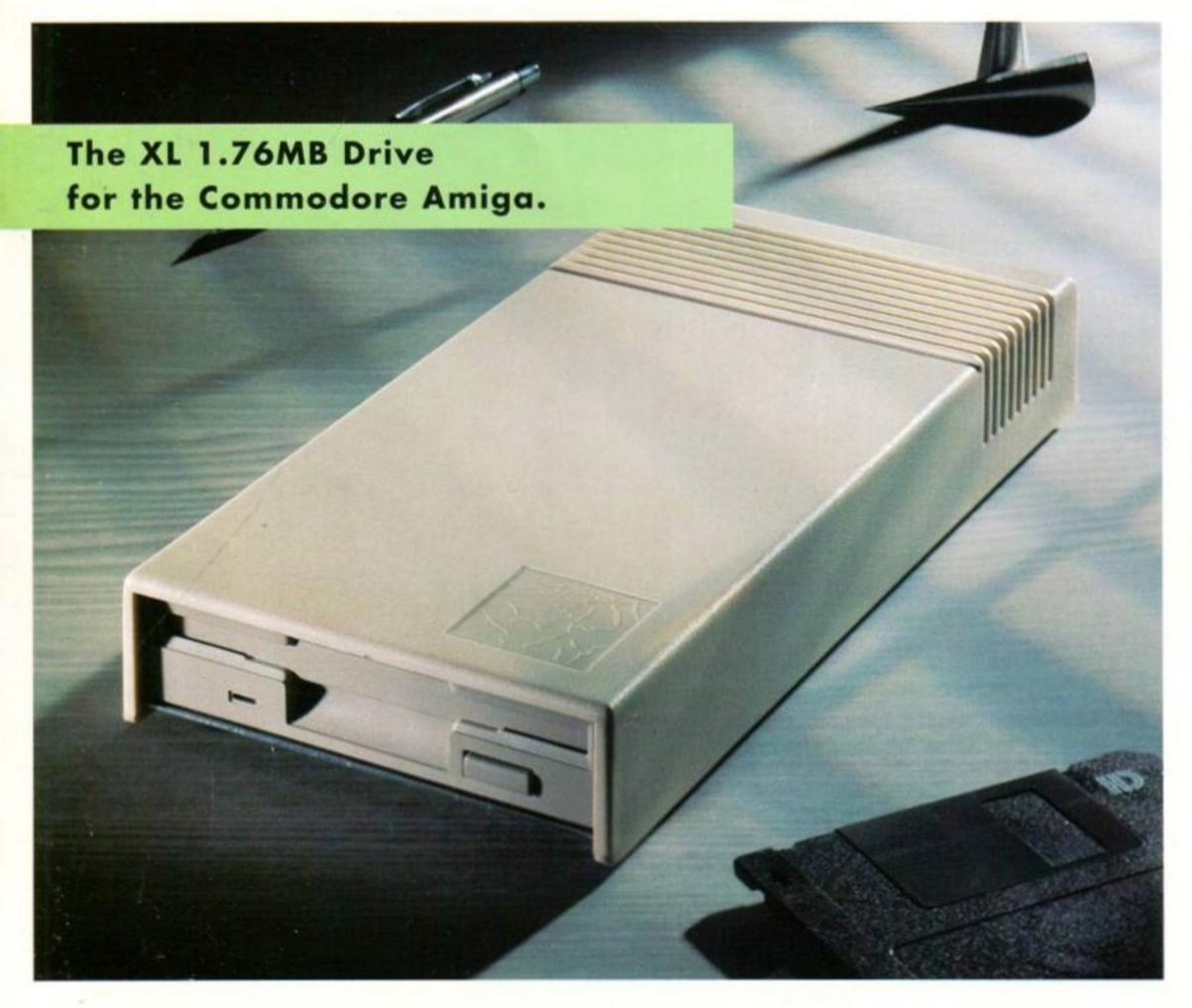**Low Power** - High density RAMs means low power consumption.

Easy To Fit - Fitted in minutes without the need to remove the computer's case.

Optional FPU Disable Switch - Disable the FPU instantly for software that will not run with a maths co-processor installed.

	Power PC1204	A leading competitor
Speed Vs standard A600	4.84 times faster	4.79 times faster
Speed Vs standard A1200	2.19 times faster	2.17 times faster
CPU MIPS	2.96	2.93

PC1204 4MB with clock, no FPU Processor **£185.95**
PC1204 4MB with clock, 20MHz 68881 FPU **£219.95**
PC1204 4MB with clock, 25MHz 68882 FPU **£279.95**
PC1204 4MB with clock, 33MHz 68882 FPU **£289.95**
PC1204 4MB with clock, 40MHz 68882 FPU **£299.95**
PC1204 4MB with clock, 50MHz 68882 FPU **£339.95**

Power Computing's XL 1.76MB Drive* for any Commodore Amiga is now available. The XL Drive includes these many features:

Formats to 1.76MB - Using high density disks you can fit a massive 1.76MB on each disk.

Acts as a standard drive - Insert an 880K Amiga disk and the drive behaves like any other Amiga drive.

Fully compatible - Will read and write disks written on an Amiga 4000 internal high density drive.

Compatible with PC disks* - Also read and write high density PC disks using a suitable device driver.

Compact size - No larger than a standard 880K floppy disk drive.

High quality design - Uses a high quality Sony high density mechanism.

Comes complete with disable switch and through port.

XL DRIVE

XL DRIVE £99.95

*Requires Kickstart 2 or above. *Requires Workbench 2.1 or above.